

DETAILED SOLUTIONS

CHAPTER 1 : LARGE NUMBERS

Let's Recall

1. (a) 4379 = Four thousand three hundred seventy-nine.
 (b) 8900 = Eight thousand nine hundred.
 (c) 7159 = Seven thousand one hundred fifty-nine.
 (d) 9999 = Nine thousand nine hundred ninety-nine.
2. (a) Three thousand seven hundred twenty = 3720 .
 (b) Five thousand eight hundred sixty-two = 5862 .
 (c) Eight thousand eighty-eight = 8088 .
 (d) Five thousand nine = 5009 .
3. (a) The place value of 3 in 7301 is 300.
 (b) The place value of 0 in 3067 is 0.
 (c) 1000 more than 5688 is 6688.
 (d) 6674 = 6 thousands + 6 hundreds + 7 tens + 4 ones.
 (e) 6236 is the predecessor of 6237 .

Practice Time 1A

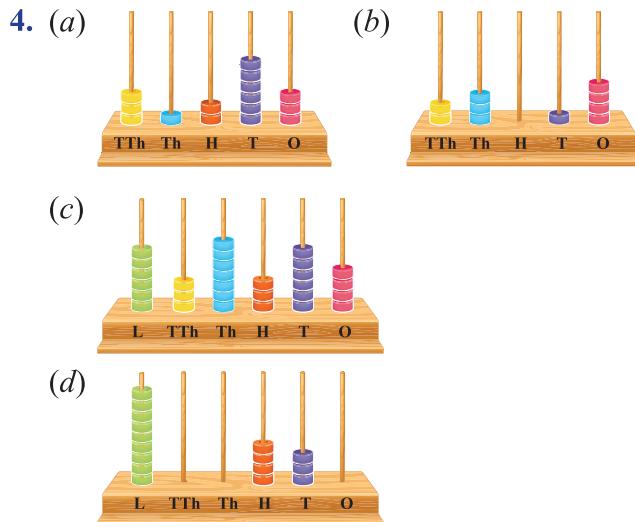
Lakhs (L) (100000)	Ten Thousands (TTh) (10000)	Thousands (Th) (1000)	Hundreds (H) (100)	Tens (T) (10)	Ones (1)
(a)	3	7	0	3	6
(b)	4	3	6	4	5
(c)	3	8	6	4	9
(d)	6	4	0	3	9

2. (a) Thirty-six thousand four hundred thirteen = 36413 .
 (b) Forty-three thousand ninety-eight = 43098 .
 (c) Four lakh ninety thousand two hundred twenty-three = 490223 .
 (d) Seven lakh four thousand eight nine = 704089 .
3. (a) $32,064$ = Thirty-two thousand sixty-four.
 (b) $36,379$ = Thirty-six thousand three hundred seventy-nine.
 (c) $94,008$ = Ninety-four thousand eight.
 (d) $27,114$ = Twenty-seven thousand one hundred fourteen.
 (e) $4,13,066$ = Four lakh thirteen thousand sixty-six.

(f) $7,36,395$ = Seven lakh thirty-six thousand three hundred ninety-five.

(g) $4,49,078$ = Four lakh forty-nine thousand seventy-eight.

(h) $2,57,141$ = Two lakh fifty-seven thousand one hundred forty-one.



5. (a) $52,483$ = Fifty-two thousand four hundred eighty-three.

(b) $60,135$ = Sixty thousand one hundred thirty.

(c) $5,42,638$ = Five lakh forty-two thousand six hundred thirty-eight.

6. (a) Numbers between $56,201$ and $56,219$
 $= 56,202; 56,203; 56,204; 56,205; 56,206; 56,207; 56,208; 56,209; 56,210; 56,211; 56,212; 56,213; 56,214; 56,215; 56,216; 56,217; 56,218$

(b) to (d) — Same as part (a).

Quick Check (Page 15)

1. $200000 + 50000 + 100 + 60 + 9 = 250169$

2. $3 \times 10000 + 7 \times 1000 + 6 \times 100 + 8 \times 1 = 37608$

Think and Answer (Page 16)

1. Greatest 5-digit number = 99999
 Successor = $99999 + 1 = 1,00,000$
2. Greatest 6-digit number = 999999
 Predecessor = $999999 - 1 = 999998$
 Number of digits = 6

Practice Time 1B

1. (a) $46975 = 900$ (b) $70347 = 70000$
 (c) $27364 = 7000$ (d) $373640 = 0$
 (e) $436243 = 400000$ (f) $508244 = 0$

2. (a) We can express 47889 in the expanded form as

$$47889 = 4 \times 10000 + 7 \times 1000 + 8 \times 100 + 8 \times 10 + 9 \times 1 \\ = 40000 + 7000 + 800 + 80 + 9$$

(b) We can express 80791 in the expanded form as

$$80791 = 8 \times 10000 + 0 \times 1000 + 7 \times 100 + 9 \times 10 + 1 \times 1 \\ = 80000 + 0 + 700 + 90 + 1 \\ = 80000 + 700 + 90 + 1$$

(c) We can express 578914 in the expanded form as

$$578914 = 5 \times 100000 + 7 \times 10000 + 8 \times 1000 + 9 \times 100 + 1 \times 10 + 4 \times 1 \\ = 500000 + 70000 + 8000 + 900 + 10 + 4$$

(d) We can express 800450 in the expanded form as

$$800450 = 8 \times 100000 + 0 \times 10000 + 0 \times 1000 + 4 \times 100 + 5 \times 10 + 0 \\ = 800000 + 0 + 0 + 400 + 50 + 0 \\ = 800000 + 400 + 50$$

3. (a) $300000 + 8000 + 900 + 60 = 308960$
 (b) $1L + 4TTh + 3Th + 6H + 2T + 9O$
 $= 1 \times 100000 + 4 \times 10000 + 3 \times 1000 + 6 \times 100 + 2 \times 10 + 9 \times 1$
 $= 1 + 100000 + 40000 + 3000 + 600 + 20 + 9$
 $= 143629$
 (c) $8 \times 100000 + 7 \times 10000 + 5 \times 1000 + 4 \times 100 + 2 \times 1$
 $= 800000 + 70000 + 5000 + 400 + 2$
 $= 875402$

4. (a) Predecessor of 34364 = $34364 - 1 = 34363$
 Successor of 34364 = $34364 + 1 = 34365$
 (b) Predecessor of 73648 = $73648 - 1 = 73647$
 Successor of 73648 = $73648 + 1 = 73649$
 (c) Predecessor of 11143 = $11143 - 1 = 11142$
 Successor of 11143 = $11143 + 1 = 11144$
 (d) Predecessor of 840068 = $840068 - 1 = 840067$
 Successor of 840068 = $840068 + 1 = 840069$

(e) Predecessor of 154836 = $154836 - 1 = 154835$

Successor of 154836 = $154836 + 1 = 154837$

(f) Predecessor of 199999 = $199999 - 1 = 199998$

Successor of 199999 = $199999 + 1 = 200000$

5. (a) Sum of the place value of two 6s in 460246 = $60000 + 6 = 60006$

(b) Place value of 4 in 740128 = 40000

Face value of 4 in 740128 = 4

Difference = $40000 - 4 = 39996$

Practice Time 1C

1. (a) $58,696 < 9,98,769$ (b) $63,201 < 63,990$

(c) $4,69,422 > 4,66,422$

(d) $9,99,989 < 9,99,999$

2. (a) Greatest number = 87,856

Smallest number = 38,857

(b) Greatest number = 4,88,332

Smallest number = 45,657

(c) Greatest number = 6,45,562

Smallest number = 6,45,172

(d) Greatest number = 5,78,960

Smallest number = 5,68,960

3. (a) First, we arrange the given numbers in the place value chart and then start comparing.

TTh	Th	H	T	O
2	7	8	9	5 \rightarrow ii
2	7	6	5	6 \rightarrow i
8	8	9	7	5 \rightarrow iv
7	5	6	9	0 \rightarrow iii

27,656 is the smallest number and 88,975 is the greatest number.

Also, 27,895 is smaller than 75,690

So, $27,656 < 27,895 < 75,690 < 88,975$.

(b) First, we arrange the given numbers in the place value chart and then start comparing. 39,850 is the smallest number and 49,560 is the greatest number.

Also, 39,856 is smaller than 39,876

So, $39,850 < 39,856 < 39,876 < 49,560$.

TTh	Th	H	T	O
3	9	8	5	0 \rightarrow i
Same 3	9	8	5	6 \rightarrow ii
3	9	8	7	6 \rightarrow iii
4	9	5	6	0 \rightarrow iv

↑ Same

(c) Same as part (b)

(d) Same as part (b)

4. (a) First, we arrange the given numbers in the place value chart and then start comparing.

42,560 is the greatest number and 42,103 is the smallest number.

Also, 42,206 is greater than 42,105

So, $42,560 > 42,206 > 42,105 > 42,103$.

(b) Same as part (a)

(c) Same as part (a)

(d) Same as part (a)

T	T	H	T	O
4	2	5	6	0
4	2	1	0	3
4	2	1	0	5
4	2	2	0	6

↑ Same ↑ Same

Practice Time 1D

1.	Digits	Greatest number	Smallest number
(a)	2, 7, 3, 5, 1	75321	12357
(b)	7, 5, 4, 8, 0	87540	40578
(c)	9, 8, 3, 0, 2, 6	986320	203689
(d)	0, 1, 9, 6, 3, 7	976310	103679

2.	Digits	Greatest 5-digit number	Smallest 5-digit number
(a)	5, 8, 3, 4	88543	33458
(b)	6, 0, 7	77760	60007
(c)	2, 7, 8	88872	22278
(d)	9, 6, 0	99960	60009
(e)	5, 0	55550	50000

3.	Digits	Greatest 6-digit number	Smallest 6-digit number
(a)	1,9,7,5,0	997510	100579
(b)	2,4,6,8	888642	222468
(c)	3,7,0,9	999730	300079
(d)	6,8,9	999986	666689
(e)	4,7	777774	444447

Practice Time 1E

1. (a) $843 = 840$ (b) $785 = 790$
 (c) $997 = 1000$ (d) $3265 = 3270$
 (e) $7545 = 7550$ (f) $9048 = 9050$
 (g) $10,200 = 10200$ (h) $14,563 = 14560$

2. (a) $2,832 = 2,800$ (b) $4,567 = 4,600$
 (c) $5,055 = 5,100$ (d) $9,398 = 9,400$
 (e) $7,500 = 7,500$ (f) $14,657 = 14,700$
 (g) $32,195 = 32,200$ (h) $43,629 = 43,600$

3. (a) $23,471 = 23,000$ (b) $43,805 = 44,000$
 (c) $60,030 = 60,000$ (d) $1,24,350 = 1,24,000$
 (e) $3,45,552 = 3,46,000$ (f) $9,85,832 = 9,86,000$
 (g) $7,54,325 = 7,54,000$ (h) $8,32,981 = 8,33,000$

Practice Time 1F

1. (a) $8 = 5 + 1 + 1 + 1 = \text{VIII}$
 (b) $18 = 10 + 5 + 1 + 1 + 1 = \text{XVIII}$
 (c) $25 = 10 + 10 + 5 = \text{XXV}$
 (d) $29 = 10 + 10 + 9 = \text{XXIX}$
 (e) $95 = 90 + 5 = \text{XCV}$
 (f) $100 = \text{C}$
 (g) $149 = 100 + 40 + 9 = \text{CXLIX}$
 (h) $259 = 100 + 100 + 50 + 9 = \text{CCILIX}$
 (i) $364 = 100 + 100 + 100 + 50 + 10 + 4 = \text{CCCLXIV}$
 (j) $369 = 100 + 100 + 100 + 50 + 10 + 9 = \text{CCCLXIX}$

2. (a) $\text{XXIX} = 10 + 10 + (10 - 1) = 29$
 (b) $\text{XLII} = (50 - 10) + 1 + 1 = 40 + 2 = 42$
 (c) $\text{XLIX} = (50 - 10) + (10 - 1) = 40 + 9 = 49$
 (d) $\text{XCVIII} = (100 - 10) + 5 + 3 = 90 + 8 = 98$
 (e) $\text{LXXXIV} = 50 + 10 + 10 + 10 + 4 = 84$
 (f) $\text{CLVII} = 100 + 50 + 5 + 2 = 157$
 (g) $\text{CCLI} = 100 + 100 + 50 + 1 = 251$
 (h) $\text{CCCV} = 100 + 100 + 100 + 5 = 305$
 (i) $\text{CCCXXXV} = 100 + 100 + 10 + 10 + 10 + 5 = 335$
 (j) $\text{CCCLVIII} = 100 + 100 + 100 + 50 + 5 + 3 = 358$

3. (a) $\text{X} + \text{IX} = 10 + 9 = 19$
 (b) $\text{XXI} - \text{XVIII} = 21 - 18 = 3$
 (c) $\text{XXXIII} - \text{XIV} = 33 - 14 = 19$
 (d) $\text{XXVII} + \text{IX} = 27 + 9 = 36$

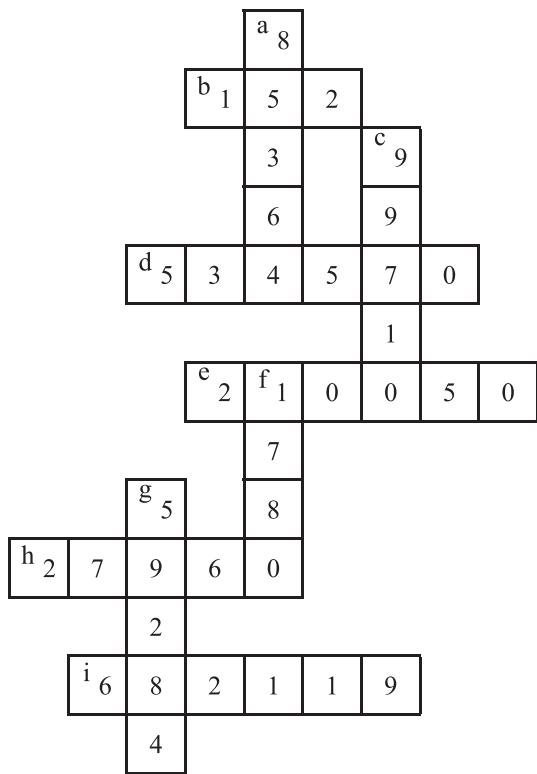
4. (a) $11 + 11 = \text{XI} + \text{XI} = \text{XXII}$
 (b) $50 - 1 = 49 = \text{XLIX}$
 (c) $100 + 50 = \text{C} + \text{L} = \text{CL}$
 (d) $100 + 100 = \text{C} + \text{C} = \text{CC}$

Mental Maths (Page 26)

1. 70 tens $= 70 \times 10 = 700$
 2. Biggest number $= 872500$
 3. $\text{CXXIV} = 100 + 10 + 10 + 4 = 124$

Detailed Solutions

Maths Fun (Page 26)



Brain Sizzlers (Page 27)

1. The greatest 5-digit number with 0 at ones place and without repeating the digits = 98760.
2. The smallest 6-digit number with 0 at ones place and without repeating the digits = 123450.
3. The greatest 6-digit number with 0 at hundred place and without repeating the digits = 987065.

Chapter Assessment

1. (a) (iii) 6,55,233.
 (b) (i) $395620 = 300000 + 90000 + 5000 + 600 + 20$
 (c) (ii) Lakhs
 (d) (iv) 100 tens
2. Given number is 85704
 - The face value and place value of digit 5 are 5 and 5000 respectively.
 - 8 is at the ten thousands place.
 - Place value of the digit 0 in the number is 0.
 - Place value of the digit 7 is seven hundred.
 - 4 is the only non-zero digit whose place value is the same as its face value.
3. (a) – (iv) $(\because LIX + CLIX = 59 + 159 = 218 \text{ and } CCXVIII = 100 + 100 + 10 + 8 = 218)$

- (b) – (i) $(\because 300 + 109 = 409 \text{ and } CDIX = (500 - 100) + 9 = 400 + 9 = 409)$
- (c) – (ii) $(\because CCC + XLIX = 100 + 100 + 100 + (50 - 10) + 9 = 349)$
- (d) – (iii) $(\because CXCIV + LXVIII = 100 + (100 - 10) + 50 + 10 + 8 = 100 + 90 + 4 + 50 + 10 + 8 = 262)$

4. (a) Fifty-four thousand = $54,000 = 3$ zeros.
 (b) Three lakh = $3,00,000 = 5$ zeros.
 (c) Eighty thousand = $80,000 = 4$ zeros.
5. (a) 56,305; 56,306; 56,307; 56,308; 56,309
 (b) 2,10,500; 2,10,400; 2,10,300; 2,10,200; 2,10,100
 (c) 3,82,354; 4,82,354; 5,82,354; 6,82,354; 7,82,354
6. (a) 105488, 105588, 105688, 105788, 105888, 105988
 (b) 691345, 692345, 693345, 694345, 695345, 696345
7. ₹3,25,501 = Three lakh twenty-five thousand five hundred one.
 Yes. For helping needy people donation is a good thing.

8.

Number of sarees sold last year =

Number of sarees sold this year =

Difference in sale of sarees =

Thus, she sold 36 sarees less in this year.

9. Money in saving account of Narayan's father = ₹4,53,900
 Money in saving account of Raman's father = ₹4,51,989
 Since ₹4,53,900 > ₹4,51,989
 Thus, Narayan's father has more money in his saving account.
10. Total number of 5-digit numbers = Greatest number – Smallest number + 1
 $= 99999 - 10000 + 1 = 89999 + 1 = 90,000.$

11. 10001, 100001 (answer may vary)
12. (a) False I can be subtracted from V and X
 (b) False V, L and D are never repeated.
 (c) False X, C and I can be repeated up to 3 times.
 (d) False X can be subtracted from L and C only.

Maths Connect (Page 29)

1. Highest mountain is Kanchenjunga = 28,169 ft.
2. Heights in ascending order (ft.) = $22940 < 23760 < 24370 < 25446 < 25643 < 28169$.

3. $22940 =$ Twenty-two thousand nine hundred forty ft.
 $23760 =$ Twenty-three thousand seven hundred sixty ft.
 $24370 =$ Twenty-four thousand three hundred seventy ft.
 $25446 =$ Twenty-five thousand four hundred forty-six ft.
 $25643 =$ Twenty-five thousand six hundred forty-three ft.
 $28169 =$ Twenty-eight thousand one hundred sixty-nine ft.
4. $22940 = 22900$; $25643 = 25600$; $28169 = 28200$;
 $24370 = 24400$; $23760 = 23800$; $25446 = 25400$

CHAPTER 2 : ADDITION AND SUBTRACTION

Let's Recall

1. (a)
$$\begin{array}{r} 2 & 8 & 5 & 4 \\ + 3 & 1 & 4 & 5 \\ \hline 5 & 9 & 9 & 9 \end{array}$$
 (b)
$$\begin{array}{r} 5 & 8 & 5 & 9 \\ - 3 & 1 & 4 & 5 \\ \hline 2 & 7 & 1 & 4 \end{array}$$

2. $1150 + 676 + 1850 - 20$

We first find the sum of 1150, 676 and 1850 and then find the difference between the sum obtained and 20 as shown below.

Th	H	T	O
1	1	5	0
6	7	6	
+ 1	8	5	0
3	6	7	6

Th	H	T	O
3	6	7	6
-		2	0
	3	6	5
	6	5	6

Thus, $1150 + 676 + 1850 - 20 = 3656$.

3.

H	T	O
(1)		

Population of village A = 5 7 6

Population of village B = + 4 1 8

Total population of two villages = 9 9 4

And,

H	T	O
(6)	(16)	

Population of village A = 5 7 6

Population of village B = - 4 1 8

Difference in their population = 1 5 8

Thus, total population of two villages is 994 and difference of their population is 158.

4. Sohail read 5761 words and

Samina read 5795.

5	7	9	5
5	7	6	1
0	0	3	4

Since, $5795 > 5761$

Thus, Samina read 34 words more.

Think and Answer (Page 35)

1. 4 thousands + 3 hundreds + 12 tens + 2 ones
 $= 4000 + 300 + 120 + 2 = 4422$.

2. 6 ten thousands + 2 thousands + 55 hundreds
 $= 6 \times 10000 + 2 \times 1000 + 55 \times 100$
 $= 60000 + 2000 + 5500 = 67500$

3. 8 thousands + 13 hundreds + 11 ones
 $= 8000 + 1300 + 11 = 9311$

Practice Time 2A

1. (a)

TTh	Th	H	T	O
7	1	2	5	3
+ 2	3	4	0	1
9	4	6	5	4

(b)

L	TTh	Th	H	T	O
2	5	9	2	1	2
+ 1	2	0	1	2	7
3	7	9	3	3	9

(c)

L	TTh	Th	H	T	O
7	5	6	2	0	0
1	0	0	1	6	8
+ 1	3	3	2	1	
8	6	9	6	8	9

(d)

L	TTh	Th	H	T	O
		(1)		(1)	
7	1	2	6	2	5
+ 2	2	1	5	3	6
9	3	4	1	6	1

(e)

L	TTh	Th	H	T	O
(1)	(1)				
7	5	6	2	0	0
	6	4	1	4	0
+ 1	2	2	5	2	6
9	4	2	8	6	6

Detailed Solutions

L	TTh	Th	H	T	O
1	1	1			
2	5	6	4	2	1
1	0	9	2	8	2
+ 1	6	2	1	2	1
	5	2	7	8	2
					4

2. (a) Arrange the digits of given numbers in the place value columns and add the numbers starting from the ones place.

Step 1. Add the ones.

$$2 \text{ ones} + 1 \text{ one} + 0 \text{ ones} = 3 \text{ ones}$$

Write 3 in the ones column

Step 2. Add the tens.

$$1 \text{ ten} + 1 \text{ ten} + 2 \text{ tens} = 4 \text{ tens}$$

Write 4 in the tens column.

Step 3. Add the hundreds.

$$3 \text{ hundreds} + 1 \text{ hundred} + 3 \text{ hundreds}$$

$$= 7 \text{ hundreds}$$

Write 7 in the hundreds column.

Step 4. Add the thousands.

$$2 \text{ thousands} + 1 \text{ thousand} + 2 \text{ thousands}$$

$$= 5 \text{ thousands}$$

Write 5 in the thousands column.

Step 5. Add the ten thousands.

$$4 \text{ ten thousands} + 1 \text{ ten thousand} + 0 \text{ ten thousands} = 5 \text{ ten thousands}$$

Write 5 in the ten thousands column.

Step 6. Add the lakhs.

$$1 \text{ lakh} + 1 \text{ lakh} +$$

$$2 \text{ lakhs} = 4 \text{ lakhs}$$

$$\text{Thus, } 142312 +$$

$$111111 + 202320$$

$$= 455743$$

L	TTh	Th	H	T	O
1	4	2	3	1	2
1	1	1	1	1	1
2	0	2	3	2	0
4	5	5	7	4	3

L	TTh	Th	H	T	O
3	1	4	0	7	0
4	6	0	1	0	2
+ 2	1	5	8	2	7
	9	8	9	9	9

L	TTh	Th	H	T	O
5	1	1	4	2	3
2	2	3	3	0	
+ 1	5	5	2	4	1
	6	8	8	9	4

L	TTh	Th	H	T	O
1	2	4	1	5	2
3	5	4	8	2	7
+ 3	1	1	0	2	0
	7	8	9	9	9

L	TTh	Th	H	T	O
1					
7	8	9	2	6	1
+ 9	0	1	2	3	
	8	7	9	3	4

L	TTh	Th	H	T	O
1					
1	1	5	2	0	6
2	5	2	6	2	1
+ 5	6	2	1	3	1
	9	2	9	9	8

Think and Answer (Page 37)

$$4256 + 10744 + 1354 = 16354$$

Checking: (Using grouping property of addition)

$$(4256 + 10744) + 1354 = 15000 + 1354 = 16354$$

$$4256 + (10744 + 1354) = 4256 + 12098 = 16354$$

Practice Time 2B

1. (a) $1 + 499 = 500$ (b) $999 + 1 = 1000$
 (c) $2436 + 0 = 2436$ (d) $0 + 5364 = 5364$
 (e) $1796 + 0 = 1796$ (f) $9999 + 1 = 10000$
 (g) $345 + 246 = 246 + 345$
 (h) $4021 + 2736 = 4021 + 2736$

2. (a) $62 + 46$

By splitting the smaller number

Step 1. $62 + 40 = 102$

Step 2. $102 + 6 = 108$

Thus, $62 + 46 = 108$.

(b) $145 + 27$

By splitting the smaller number

Step 1. $145 + 20 = 165$

Step 2. $165 + 7 = 172$

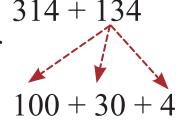
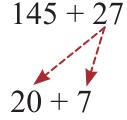
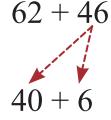
Thus, $145 + 27 = 172$.

(c) $314 + 134$

By splitting the smaller number

Step 1. $314 + 100 = 414$

$414 + 30 = 444$



Step 2. $444 + 4 = 448$

Thus, $314 + 134 = 448$.

(d) $20 + 58 = 78$ [Same as part (b)]
 (e) $204 + 536 = 740$ [Same as part (b)]
 (f) $88 + 111 = 199$ [Same as part (b)]
 (g) $534 + 201 = 735$ [Same as part (b)]
 (h) $104 + 305 = 409$ [Same as part (b)]

3. (a) $69 + 30$

By splitting the bigger number

$$\begin{array}{c} 69 + 30 \\ \swarrow \quad \searrow \\ 60 + 9 \end{array}$$

Step 1. $60 + 30 = 90$

Step 2. $90 + 9 = 99$

Thus, $69 + 30 = 99$.

(b) $22 + 42$

By splitting the bigger number

$$\begin{array}{c} 22 + 42 \\ \swarrow \quad \searrow \\ 40 + 2 \end{array}$$

Step 1. $22 + 40 = 62$

Step 2. $62 + 2 = 64$

Thus, $22 + 42 = 64$.

(c) $156 + 27$

By splitting the bigger number

$$\begin{array}{c} 156 + 27 \\ \swarrow \quad \searrow \\ 100 + 50 + 6 \end{array}$$

Step 1. $100 + 27 = 127$

Step 2. $127 + 50 = 177$

Step 3. $177 + 6 = 183$

Thus, $156 + 27 = 183$.

(d) $148 + 214 = 362$

[Same as part (c)]

(e) $395 + 168 = 563$

[Same as part (c)]

(f) $19 + 444 = 463$

[Same as part (c)]

(g) $368 + 264 = 632$

[Same as part (c)]

(h) $274 + 304 = 578$

[Same as part (c)]

4. (a) $35 + 20$

By splitting both the numbers

$$\begin{array}{c} 35 \quad + \quad 20 \\ \swarrow \quad \searrow \\ 30 + 5 \quad 20 + 0 \end{array}$$

Step 1. $30 + 20 = 50$

Step 2. $5 + 0 = 5$

Step 3. $50 + 5 = 55$

Thus, $35 + 20 = 55$.

(b) $61 + 27$

By splitting both the numbers

$$\begin{array}{c} 61 \quad + \quad 27 \\ \swarrow \quad \searrow \\ 60 + 1 \quad 20 + 7 \end{array}$$

Step 1. $60 + 20 = 80$

Step 2. $1 + 7 = 8$

Step 3. $80 + 8 = 88$

Thus, $61 + 27 = 88$.

(c) $154 + 132$

By splitting both the numbers

$$\begin{array}{c} 154 \quad + \quad 132 \\ \swarrow \quad \searrow \\ 100 + 50 + 4 \quad 100 + 30 + 2 \end{array}$$

Step 1. $100 + 100 = 200$

Step 2. $50 + 30 = 80$

Step 3. $4 + 2 = 6$

Step 4. $200 + 80 + 6 = 286$

$$\begin{array}{c} 154 \quad + \quad 132 \\ \swarrow \quad \searrow \\ 100 + 50 + 4 \quad 100 + 30 + 2 \end{array}$$

Thus, $154 + 132 = 286$.

(d) $119 + 244 = 363$ [Same as part (c)]

(e) $272 + 116 = 388$ [Same as part (c)]

(f) $58 + 248 = 306$ [Same as part (c)]

(g) $455 + 105 = 560$ [Same as part (c)]

(h) $340 + 89 = 429$ [Same as part (c)]

5. (a) Counting in hundreds, tens and ones

$$\begin{array}{c} 127 + 142 \\ \downarrow \\ \overbrace{100 + 10 + 10 + 10 + 10 + 2} \\ \downarrow \quad \downarrow \quad \downarrow \quad \downarrow \quad \downarrow \quad \downarrow \\ +100 \quad +10 \quad +10 \quad +10 \quad +10 \quad +2 \\ 127 \quad 227 \quad 237 \quad 247 \quad 257 \quad 267 \quad 269 \end{array}$$

Thus, $127 + 142 = 269$

(b) Counting in hundreds, tens and ones

$$\begin{array}{c} 546 + 122 \\ \downarrow \\ \overbrace{100 + 10 + 10 + 2} \\ \downarrow \quad \downarrow \quad \downarrow \quad \downarrow \\ +100 \quad +10 \quad +10 \quad +2 \\ 546 \quad 646 \quad 656 \quad 666 \quad 668 \end{array}$$

Thus, $546 + 122 = 668$

(c) Counting in hundreds, tens and ones

$$\begin{array}{c} 371 + 208 \\ \downarrow \\ \overbrace{100 + 100 + 8} \\ \downarrow \quad \downarrow \quad \downarrow \\ +100 \quad +100 \quad +8 \\ 371 \quad 471 \quad 571 \quad 579 \end{array}$$

Thus, $371 + 208 = 579$

(d) Counting in hundreds, tens and ones

$$\begin{array}{c} 246 + 836 \\ \downarrow \\ \overbrace{100 + 100 + 10 + 10 + 10 + 10 + 6} \\ \downarrow \quad \downarrow \quad \downarrow \quad \downarrow \quad \downarrow \quad \downarrow \quad \downarrow \\ +100 \quad +100 \quad +10 \quad +10 \quad +10 \quad +10 \quad +6 \\ 836 \quad 936 \quad 1036 \quad 1046 \quad 1056 \quad 1066 \quad 1076 \quad 1082 \end{array}$$

Thus, $246 + 836 = 1082$

Practice Time 2C

1.

T	T	H	T	O
1	1			

Withdrawn on Monday = ₹ 2 6 8 0 0

Withdrawn on Tuesday = + ₹ 3 7 4 0 0

Total amount withdrawn = ₹ 6 4 2 0 0

Thus, Mr. Sohan withdrew ₹64200 from the bank in all.

2. (a)

T	T	H	T	O
1	1			

Cost of computer = ₹ 4 5 8 5 0

Cost of scanner = + ₹ 1 3 7 5 0

Total cost of both items = ₹ 5 9 6 0 0

Thus, cost of computer and scanner is ₹59600.

(b)

T	T	H	T	O
1	1			

Cost of computer = ₹ 4 5 8 5 0

Cost of printer = + ₹ 1 8 9 9 0

Total cost of both items = ₹ 6 4 8 4 0

Thus, cost of computer and printer is ₹64840.

(c)

T	T	H	T	O
1	1	1		

Cost of scanner = ₹ 1 3 7 5 0

Cost of printer = + ₹ 1 8 9 9 0

Total cost of both items = ₹ 3 2 7 4 0

Thus, cost of scanner and printer is ₹32740.

(d)

T	T	H	T	O
1	2	1		

Cost of printer = ₹ 1 8 9 9 0

Cost of computer = ₹ 4 5 8 5 0

Cost of scanner = + ₹ 1 3 7 5 0

Total cost of three items = ₹ 7 8 5 9 0

Thus, total cost of all item is 78,590.

3.

L	T	T	H	T	O
2	1				
2	5	3	0	1	
3	5	7	0	1	
4	9	0	3	2	
1	1	0	0	3	4

The population of city A =

The population of city B =

The population of city C = +

Total population of three

cities =

Thus, total population of three cities = 110034.

4.

L	T	T	H	T	O
1	2	2	1		
5	4	9	8	7	
3	4	5	6	7	
2	5	7	9	3	
1	1	5	3	4	7

Number of visitors came in January =

Number of visitors came in February =

Number of visitors came in March = +

Thus, number of visitors visited the zoo in three month is 115347.

5.

L	T	T	H	T	O
2	1	2	1		
1	0	9	0	7	7
1	2	8	8	5	9
1	3	8	7	9	3
3	7	6	7	2	9

Number of toys produced in 2020 =

Number of toys produced in 2021 =

Number of toys produced in 2022 = +

Thus, the production of toys in these three years = 376729

6.

L	T	T	H	T	O
2	2	1	1		
7	6	9	5	3	
7	5	2	4	3	
9	8	9	3	4	
2	5	1	1	3	0

Number of votes received by 1st candidate =

Number of votes received by 2nd candidate =

Number of votes received by 3rd candidate = +

Thus, 251130 votes were polled.

Practice Time 2D

TTh	Th	H	T	O
5	3	7	5	3
-	3	0	4	2
2	3	3	3	1

TTh	Th	H	T	O
6	7	3	9	5
-	3	6	1	0
3	1	2	9	2

TTh	Th	H	T	O
7	12	2	14	
8	2	6	3	4
-	4	5	6	2
3	7	0	0	7

TTh	Th	H	T	O
				13
			2	3
5	8	3	4	0
2	3	0	6	8
3	5	2	7	2

TTh	Th	H	T	O
9	9	9		
6	10	10	10	10
7	8	8	8	8
-	5	2	5	4
1	7	4	5	7

L	TTh	Th	H	T	O
9	9	9	9	9	9
3	10	10	10	10	10
4	8	8	8	8	8
-	1	3	6	1	3
2	6	3	8	6	7

2. (a) Since, $56433 < 68654$

So, we write 56433 below 68654 in the place value columns.

Step 1. Subtract the ones.

$$4 \text{ ones} - 3 \text{ ones} = 1 \text{ one}$$

Write 1 in the ones column.

Step 2. Subtract the tens.

$$5 \text{ tens} - 3 \text{ tens} = 2 \text{ tens}$$

Write 2 in the tens column.

Step 3. Subtract the hundreds.

$$6 \text{ hundreds} - 4 \text{ hundreds} = 2 \text{ hundreds.}$$

Write 2 in the hundreds column.

Step 4. Subtract the thousands.

$$8 \text{ thousands} - 6 \text{ thousands} = 2 \text{ thousands.}$$

Write 2 in the thousands column.

Step 5. Subtract the ten thousands.

$$6 \text{ ten thousands} - 5 \text{ ten thousands} = 1 \text{ ten thousand.}$$

Write 1 in the ten thousands column.

TTh	Th	H	T	O
6	8	6	5	4
-	5	6	4	3
1	2	2	2	1

Thus, $68654 - 56433 = 12221$.

(b) Since, $523427 < 759638$

So, we write 523427 below 759638 in the place value columns.

Step 1. Subtract the ones.

$$8 \text{ ones} - 7 \text{ ones} = 1 \text{ one}$$

Write 1 in the ones column.

Step 2. Subtract the tens.

$$3 \text{ tens} - 2 \text{ tens} = 1 \text{ ten}$$

Write 1 in the tens column.

Step 3. Subtract the hundreds.

$$6 \text{ hundreds} - 4 \text{ hundreds} = 2 \text{ hundreds.}$$

Write 2 in the hundreds column.

Step 4. Subtract the thousands.

$$9 \text{ thousands} - 3 \text{ thousands} = 6 \text{ thousands.}$$

Write 6 in the thousands column.

Step 5. Subtract the ten thousands.

$$5 \text{ ten thousands} - 2 \text{ ten thousands} = 3 \text{ ten thousands.}$$

Write 3 in the ten thousands column.

Step 6. Subtract the lakhs.

$$7 \text{ lakhs} - 5 \text{ lakhs} = 2 \text{ lakhs.}$$

Write 2 in the lakhs column.

L	TTh	Th	H	T	O
7	5	9	6	3	8
-	5	2	3	4	2
2	3	6	2	1	1

Thus, $759638 - 523427 = 236211$.

L	TTh	Th	H	T	O
				6	10
8	6	5	7	0	9
-	2	2	4	3	0
6	4	1	3	9	9

L	TTh	Th	H	T	O
	9	9	9	9	9
4	10	10	10	10	10
5	8	8	8	8	8
-	3	3	5	2	3
1	6	4	7	8	7

Detailed Solutions

3. (a)

L	TTh	Th	H	T	O
8	8	4	9	3	2
-	4	4	3	5	2
4	4	1	4	1	1

Minuend
Subtrahend
Difference

↓ 2 ones - 1 one = 1 one
 ↓ 3 tens - 2 tens = 1 ten
 ↓ 9 hundreds - 5 hundreds
 = 4 hundreds
 ↓ 4 thousands - 3 thousand
 = 1 thousand
 ↓ 8 ten thousands - 4 ten thousands
 = 4 ten thousand
 ↓ 8 lakhs - 4 lakhs = 4 lakhs

Thus, $884932 - 443521 = 441411$

L	TTh	Th	H	T	O
Subtrahend	4	4	3	5	2
Difference	+	4	4	1	4
Minuend	8	8	4	9	3

Check: The result or the difference when added to the subtrahend must give the minuend.

Hence, the answer is correct.

(b)

L	TTh	Th	H	T	O
8	9	5	9	4	2
-	7	6	2	4	3
1	3	3	5	1	0

(c)

L	TTh	Th	H	T	O
7	9	5	6	2	1
-	5	3	2	4	1
2	6	3	2	1	0

(d)

L	TTh	Th	H	T	O
(9)	(9)	(9)	(9)		
(8)	(10)	(10)	(10)	(10)	(10)
(9)	(9)	(9)	(9)	(9)	(9)
-	8	4	3	2	5
0	5	6	7	4	6

4. To get the required number, we subtracted 37,214 from 97,364. Arrange the number in columns and Subtract as shown here.

TTh	Th	H	T	O
9	7	3	6	4
-	3	7	2	1
6	0	1	5	0

Checking →

TTh	Th	H	T	O
9	7	3	6	4
-	6	0	1	5
3	7	2	1	4

Thus, 60,150 must be added to 37,214 to get 97364.

5. To get the required number, we subtract 89,327 from 1,65,342 and the check the answer.

L	TTh	Th	H	T	O
(15)					
(5)	(15)		(3)	(12)	
1	6	8	3	4	2
-	8	9	3	2	7
0	7	6	0	1	5

Checking

L	TTh	Th	H	T	O
(15)					
(5)	(15)		(3)	(12)	
1	6	8	3	4	2
-	7	6	0	1	5
0	8	9	3	2	7

Thus, 76,015 must be subtracted from 1,65,342 to get 89,327.

6. To get the required number, we subtract 14,952 from 93,570.

TTh	Th	H	T	O
(12)				
(8)	(2)	(15)	(6)	(10)
(9)	(3)	(5)	(7)	(8)
1	4	9	5	2
7	8	6	1	8

Practice Time 2E

1. (a) $43189 - 0 = 43189$ (b) $77782 - 1 = 77781$

(c) $54135 - 54135 = 0$ (d) $64871 - 0 = 64871$

(e) $578521 - 100 = 578421$

(f) $46340 - 0 = 46340$ (g) $53956 - 0 = 53956$

(h) $158950 - 158950 = 0$

(i) $299100 - 299100 = 0$

2. (a) $5846 - 304$.

By splitting the smaller number using the place values.

$5846 - 304$
 300 4

Step 1. $5846 - 300 = 5546$

Step 2. $5846 - 4 = 5542$

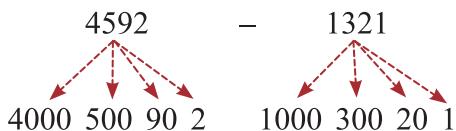
Also, we can have:

$- 4$ $- 100$ $- 100$ $- 100$
 5542 5546 5646 5746 5846

So, $5846 - 304 = 5542$.

(b) $4592 - 1321$.

By splitting both the number using place values.



Step 1. $4000 - 1000 = 3000$

Step 2. $500 - 300 = 200$

Step 3. $90 - 20 = 70$

Step 4. $2 - 1 = 1$

Step 5. $3000 + 200 + 70 + 1 = 3271$

So, $4592 - 1321 = 3271$.

(c) $5859 - 1208$.

By splitting both the number using place values.



Step 1. $5000 - 1000 = 4000$

Step 2. $800 - 200 = 600$

Step 3. $50 - 0 = 50$

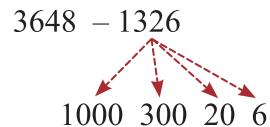
Step 4. $9 - 8 = 1$

Step 5. $4000 + 600 + 50 + 1 = 4651$

So, $5859 - 1208 = 4651$.

(d) $3648 - 1326$

By splitting the smaller number using the place values.



Step 1. $3648 - 1000 = 2648$

Step 2. $2648 - 300 = 2348$

Step 3. $2348 - 20 = 2328$

Step 4. $2328 - 6 = 2322$

So, $3648 - 1326 = 2322$.

Practice Time 2F

1.

T	T	H	T	O
		(14)	(15)	
(1)	(4)	(5)	(11)	
2	5	8	1	5

Number of bags of rice in the godown =

Number of bags sold =

Number of bags left in the godown =

Thus, 17970 bags left in the godown.

Detailed Solutions

2.

T	T	H	T	O
		(9)	(12)	
(1)	(10)	(2)	(10)	
2	8	3	8	8
1	3	4	5	2
0	6	8	5	6

Number of TV sets produced in 2021 =

Number of TV sets produced in 2020 =

Increase in production of TV

sets =

Thus, increase in the production of TV set = 6856.

3.

T	T	H	T	O
		(9)	(9)	
(6)	(10)	(10)	(10)	
8	7	8	8	8
2	5	0	2	
8	4	4	9	8

Thus, 84498 litres milk left with dairy.

4.

Cost of second hand car = ₹ 9 5 7 0 0

Amount of money Rohan has = ₹ 6 3 3 0 0

More money required = ₹ 3 2 4 0 0

Thus, Rohan needs ₹32400 more to purchase the car.

5.

L	T	T	H	T	O
		(13)	(14)	(13)	
(2)	(3)	(4)	(3)	(10)	
1	3	4	5	4	0
2	9	7	8	1	
1	0	4	7	5	9

Total number of seating capacity in the stadium =

Number of seats remains

vacant =

Number of people watched

the event =

Thus, the number of people watched the event is 104759.

6.

L	T	T	H	T	O
					(14)
(2)	(17)		(7)	(4)	(10)
3	7	4	8	5	0
1	9	2	3	5	8
1	8	2	4	9	2

Total sale of two months in a jewellery shop = ₹

The sale of first month = ₹

The sale of second month = ₹

Thus, the sale of second months is of ₹182492.

Practice Time 2G

1. (a) $32,617 + 11,358 - 23,471$

We first find the sum of 32,617 and 11,358 and then find the difference between the sum obtained and 23,471 as shown below.

T	T	H	T	O
			1	
3	2	6	1	7
+	1	1	3	5 8
	4	3	9	7 5

T	T	H	T	O
			2	
4	3	9	7	1
-	2	3	4	7 1
	2	0	5	0 4

Thus, $32,617 + 11,358 - 23,471 = 20,504$.

(b) $45,243 + 13,648 - 17,647$

We first find the sum of 45,243 and 13,648 and then find the difference between the sum obtained and 17,647 as shown below.

T	T	H	T	O
			1	
4	5	2	4	3
+	1	3	6	4 8
	5	8	8	9 1

T	T	H	T	O
			8	11
5	8	8	8	X
-	1	7	6	4 7
	4	1	2	4 4

Thus, $45,243 + 13,648 - 17,647 = 41,244$.

(c) and (d) — Same as above

(e) $2,71,409 - 4,67,521 - 1,10,216 + 389,899$

Step 1. Add the numbers having + sign.

L	T	T	H	T	O
1	1	1	1	1	1
2	7	1	4	0	9
+	3	8	9	8	9 9
	6	6	1	3	0 8

Step 2. Add the numbers having - sign.

L	T	T	H	T	O
4	6	7	5	2	1
+	1	1	0	2	1 6
	5	7	7	7	3 7

Step 3. Subtract the sum obtained in step 2. from the sum obtained in step 1.

L	T	T	H	T	O
	15	10	12		
5	8	8	2	10	
X	X	X	X	8	8
-	5	7	7	3	7
	0	8	3	5	7 1

Thus, $2,71,409 - 4,67,521 - 1,10,216 + 389,899 = 83,571$

2.

Number of people entered

before the noon =

Number of people entered

after the noon = +

T	T	H	T	O
1	1			
2	5	9	4	2
1	4	9	4	0
3	0	8	8	2

Number of persons

accommodate in auditorium =

Number of people entered in

auditorium = -

T	T	H	T	O
			14	
	4	4	10	
6	8	8	8	7
3	0	8	8	2
3	4	6	2	5

Thus, 34,625 more people can sit in the auditorium.

3.

Number of men visited the

national museum =

4 2 7 5

Number of men visited the

national museum = +

3 5 4 9

T	T	H	T	O
---	---	---	---	---

Total number of

people visited the national

museum =

T	T	H	T	O
---	---	---	---	---

X 0 2 5 0

Number of men and

women visited the national

museum = -

T	T	H	T	O
---	---	---	---	---

T	T	H	T	O
---	---	---	---	---

Thus, 2426 children visited the national museum.

Brain Sizzlers (Page 46)

Donation collected by the first society = ₹56987

Donation collected by the second society

= ₹56987 + ₹3452 = ₹60439

Donation collected by the third society

= ₹56987 - ₹6981 = ₹50006

Total donation amount

= ₹56987 + ₹60439 + ₹50006

		(1)	(1)	(2)	
₹	5	6	9	8	7
₹	6	0	4	3	9
+	₹	5	0	0	6
	₹	1	6	7	4 3 2

Thus, total amount collected in three societies is ₹167432.

Practice Time 2H

1. (a) Rounding off 2,136 to the nearest 1000s = 2000

(Since hundreds digit, i.e. 1 < 5)

Rounding off 1,258 to the nearest 1000s = 1000

(Since hundreds digit, i.e. 2 < 5)

Estimated Sum

T	h	H	T	O
2	0	0	0	0
+	1	0	0	0

Actual Sum

T	h	H	T	O
			(1)	
			2	1
			3	6

Thus, 3,000 is the estimated sum and 3,394 is the actual sum.

(b) Rounding off 4,736 to the nearest 1000s = 5000

(Since hundreds digit, i.e., 7 > 5)

Rounding off 7,192 to the nearest 1000s = 7000

(Since hundreds digit, i.e., 1 < 5)

Estimated Sum

T	h	H	T	O
(1)				
	5	0	0	0
+	7	0	0	0

Actual Sum

T	h	H	T	O
			(1)	
			4	7
			3	6

Thus, 12,000 is the estimated sum and 11,928 is the actual sum.

(c) Same as part (b).

(d) Rounding off 12,733 to the nearest ten thousand

→ 10,000 (Since thousand digit, i.e., 2 < 5)

Rounding off 45,264 to the nearest ten thousand

→ 50,000 (Since hundreds digit, i.e., 5 = 5)

Estimated Sum

T	h	H	T	O
1	0	0	0	0
+	5	0	0	0

Actual Sum

T	h	H	T	O
	1	2	7	3
			4	5
			2	6

Thus, 60,000 is the estimated sum and 57,997 is the actual sum.

(e) Rounding off 74,732 to the nearest ten thousand

→ 70,000 (Since thousand digit, i.e., 4 < 5)

Rounding off 22,486 to the nearest ten thousand → 20,000 (Since hundreds digit, i.e., 2 < 5)

Estimated Sum

T	h	H	T	O
7	0	0	0	0
+	2	0	0	0
	9	0	0	0

Actual Sum

T	h	H	T	O
(1)	(1)			
7	4	7	3	2
+	2	2	4	8

Thus, 90,000 is the estimated sum and 97,218 is the actual sum.

(f) to (i) — Same as part (e).

2. (a) Rounding off 3,136 to the nearest 1000s = 3000

(Since hundreds digit, i.e., 1 < 5)

Rounding off 1,285 to the nearest 1000s = 1000

(Since hundreds digit, i.e., 2 < 5)

Estimated Difference

T	h	H	T	O
3	0	0	0	0
+	1	0	0	0
	2	0	0	0

T	h	H	T	O
(2)	(10)	(13)		
	3	2	8	5
+	1	8	5	1

Thus, the estimated difference is 2000 and actual difference is 1851.

(b) Rounding off 4,736 to the nearest 1000s = 5000

(Since hundreds digit, i.e., 7 > 5)

Rounding off 3,192 to the nearest 1000s = 3000

(Since hundreds digit, i.e., 1 < 5)

Estimated Difference

T	h	H	T	O
5	0	0	0	0
+	3	0	0	0
	2	0	0	0

T	h	H	T	O
(6)	(13)			
	4	7	3	6
+	3	1	9	2

Thus, the estimated difference is 2000 and actual difference is 1544.

(c) Rounding off 27,783 to the nearest 10000s = 30,000 (Since thousands digit, i.e., 7 > 5)

Rounding off 4,572 to the nearest 1000s = 5,000 (Since hundreds digit, i.e., 5 = 5)

Estimated Difference

T	h	H	T	O
2	7	7	8	3
+	4	5	7	2
	2	3	2	1

T	h	H	T	O
(2)	(10)			
	3	0	0	0
+	5	0	0	0

Thus, the estimated difference is 25,000 and actual difference is 23,211.

Detailed Solutions

(d) Rounding off 42,733 to the nearest 10000s = 40,000 (Since thousands digit, i.e., 2 < 5)
 Rounding off 15,264 to the nearest 10000s = 20,000 (Since thousands digit, i.e., 5 = 5)

Estimated Difference Actual Difference

TTh	Th	H	T	O
4	0	0	0	0
-	2	0	0	0
2	0	0	0	0

TTh	Th	H	T	O
				(12)
(3)	(12)	(6)	(2)	(13)
✓	✓	✓	✓	✓
-	1	5	2	6
	2	7	4	6
	9			

Thus, the estimated difference is 20,000 and actual difference is 27,469.

(e) to (i) — Same as above.

3.

Actual Sum					
L	TTh	Th	H	T	O
			(1)	(1)	
	6	5	2	3	4
Number of men =	6	0	5	5	6
Number of women =	7	8	9	5	4
Number of Children = +	2	0	4	7	4
	2	0	4	7	4
	4	7	4	4	

Difference between actual sum and estimated sum.

L	TTh	Th	H	T	O
		(9)	(9)	(9)	
	(0)	(10)	(10)	(10)	(10)
2	X	X	X	X	X
-	2	0	4	7	4
	0	0	5	2	5
	6				6

Thus, the approximate value of estimated sum is 2,10,000 and the difference between actual sum and estimated sum is 5256.

Chapter Assessment

1. (a) — (ii)

L	TTh	Th	H	T	O
(1)	(1)	(1)			
7	7	6	2	4	
+ 3	3	3	9	1	
1 1 1 0 1 5					

Hence, Option (ii) is correct

(b) — (ii) 6

L	TTh	Th	H	T	O
(1)					
6	7	*	*	5	
+ 3	4	1	*	*	
1 0 1 * * *					

∴ Sum of digits at thousands column

$$= 7 + 4 = 11 \text{Th} = 1 \text{TTh} + 1 \text{Th}$$

∴ Sum of digits at ten thousands column = 6 + 3

$$+ (1) = 10 \text{TTh} = 1 \text{L} + 0 \text{TTh}$$

Thus, the number of digits in the sum = 6.

(c) — (i)

TTh	Th	H	T	O
		(9)		
(2)	(10)	(14)	(4)	(11)
X	X	X	X	X

$$\begin{array}{r} \text{Minuend} = \\ \text{Difference} = - \\ \text{Subtrahend} = \end{array} \begin{array}{r} 2 \\ 5 \\ 5 \\ 1 \\ 4 \end{array}$$

Thus, subtrahend is 25514.

(d) — (iv)

TTh	Th	H	T	O
(4)	(10)			
5	X	9	8	9
-	6	0	0	0
4	4	9	8	9

$$\therefore 45,463 > 44,989$$

$$\text{Thus, } 45,463 > 50,989 - 6000.$$

(e) — (iv) ∵ 46370 - 23817 = 22553 and

$$23817 - 1264 = 22553$$

$$\therefore 22553 = 22553$$

Hence, option (iv) is correct.

2. (a)

L	TTh	Th	H	T	O
5	7	3	9	5	2
- 2	5	0	8	6	4
3 2 3 0 8 8					

(b)

L	TTh	Th	H	T	O
6	7	2	9	3	4
- 3	8	4	6	2	8
2 8 8 3 0 6					

(c)

L	TTh	Th	H	T	O
8	4	7	2	8	0
- 5	3	8	0	9	2
3 0 9 1 8 8					

3.

L	TTh	Th	H	T	O
		(1)			
Raj's saving =	₹	5	5	0	0
Rahul's saving = + ₹	6	7	0	0	0
Rajeev's saving = + ₹	4	3	0	0	0
Total saving = ₹	1	6	5	0	0

	L	TTh	Th	H	T	O
Money required to begin the start-up =	₹ 3	0	0	0	0	0
And the total saving = - ₹ 1	6	5	0	0	0	0
	₹ 1	3	5	0	0	0

Thus, ₹1,35,000 more is needed to begin their start-up.

4.

	TTh	Th	H	T	O
Workers in first shift =	1	0	7	5	0
Workers in second shift = +	1	2	6	5	0
Total worker of both shift =	2	3	4	0	0
	TTh	Th	H	T	O
Total worker in the factory =	3	5	6	7	5
Total workers in first and second shift = -	2	3	4	0	0
Workers come in the third shift =	1	2	2	7	5

Thus, 12275 workers come in the third shift.

5.

	TTh	Th	H	T	O
Kits distributed by Ruhani =	4	5	6	8	0
Diff. between no. of kits distributed by two sisters = -	1	4	0	2	8
Kits distributed by her sister =	3	1	6	5	2

Thus, 31652 first aid kits distributed by her sister.

6. Number of votes A secured = 60,008

Number of votes B secured = 50,352

Number of votes C secured = 78,980

Clearly, $78,980 > 60,008 < 50,352$. Thus, candidate C is the winner. Now,

	TTh	Th	H	T	O
Number of votes C secured =	7	8	9	8	0
Number of votes A secured = -	6	0	0	0	8
Number of votes by which C won the election =	1	8	9	7	2

That is, C won the election by 18,972 votes.

7.

	Th	H	T	O
Distance travelled in the first part =	2	4	5	0
Distance travelled in the second part = +	3	5	0	0
Distance travelled in the third part = +	2	7	0	0

	TTh	Th	H	T	O
Total distance between two major cities =	1	2	6	0	0
Distance travelled in first, second and third parts = -	8	6	5	0	km
Distance need to cover =	3	9	5	0	km

Thus, 3950 km distance has to be covered in the fourth part to complete the journey.

8.

	TTh	Th	H	T	O
				(12)	
	(6)	(15)	(7)	(2)	(10)
Mohan's monthly income =	₹ 7	5	8	3	0
Radhika's monthly income = -	₹ 5	9	0	8	9
Difference between their monthly income =	₹ 1	6	7	4	1

Thus, difference between their monthly income is ₹16741.

9.

	TTh	Th	H	T	O
	(9)	(9)			
	(4)	(10)	(10)	(10)	
Funds needed by an NGO =	₹ 5	8	0	0	0
Funds collected so far = -	₹ 1	8	7	5	0
Short off money =	₹ 3	1	2	5	0

Thus, the short off money for the NGO is ₹31,250.

Mental Maths (Page 51)

1. (a) $5000 + 8 + 18 = 5026$

	T	H	O
		(1)	
	5	0	0
			8
+		1	8
	5	0	2

(b) $6567 + 9845 + 372 = 16784$

	TTh	Th	H	T	O
	(1)	(1)	(1)	(1)	
	6	5	6	7	
	9	8	4	5	
+		3	7	2	
	1	6	7	8	4

$$\begin{aligned}
 (c) & 8 \text{ ten thousands} + 5 \text{ thousands} + 15 \text{ hundreds} \\
 & + 12 \text{ tens} \\
 & = 8 \times 10000 + 5000 + 1500 + 12 \times 10 \\
 & = 8 \times 10000 + 5000 + 1500 + 120 = 86620
 \end{aligned}$$

(d) The difference between 8095 and 3002 is 5093

Th	H	T	O
8	0	9	5
-	3	0	0
5	0	9	3

$$2. (a) \because 10000 + 45555 = 55555$$

Thus, the two numbers are 10000 and 45555.

$$(b) \because 800000 + 98989 = 898989$$

Thus, the two numbers are 800000 and 98989.

CHAPTER 3 : MULTIPLICATION

Let's Recall

$$1. (a) 24 \times 15 = 360$$

$$(b) 3555 \times 100 = 355500$$

$$(c) 20 \times 10 \times 5 = 20 \times 10 \times 5$$

T	H	T	O
		(2)	
3	1	3	
	1	2	
	6	2	6
+	3	1	3
	3	7	5
	6	2	6
	1	3	0
	3	7	5
	6	2	6
	1	3	0
	3	7	5

T	H	T	O
		(1)	(2)
1	2	5	
	1	5	
	6	2	5
+	1	2	5
	1	8	7
	6	2	5
	1	2	5
	1	8	7
	6	2	5

3. Cost of one toy = ₹125

Cost of 8 toys = ₹125 × 8

Thus, the cost of 8 toys is ₹1000.

Practice Time 3A

T	T	H	T	O
(1)	(2)		(1)	
3	7	2	4	
			3	
+				
	1	1	1	7
	6	2	5	2

T	T	H	T	O
		(4)	(5)	(1)
6	7	8	2	
			7	
+				
	4	7	4	7
	6	7	8	2

T	T	H	T	O
(2)	(8)	(8)		
7	2	8	9	
			9	
+				
	6	5	6	0
	6	5	6	0

2. (a) **Step 1.** Multiply 4 ones by 4.

$$4 \times 4 = 16 \text{ ones}$$

1 ten 6 ones

Write 6 in the ones column and carry 1 to the tens column.

T	H	T	O
	(1)	(1)	
1	2	3	4
			4
	4	9	3

Step 2. Multiply 3 tens by 4.

$$3 \times 4 = 12 \text{ and } 12 \text{ tens} + 1 \text{ ten}$$

(carried over)

$$13 \text{ tens} = 1 \text{ hundred } 3 \text{ tens}$$

Write 3 in the tens column and carry 1 to the hundreds column.

Step 3. Multiply 2 hundred by 4.

$$\begin{aligned}
 2 \times 4 &= 8 \text{ hundreds and } 8 \text{ hundreds} + \\
 &1 \text{ hundred (carried over)} \\
 &= 9 \text{ hundreds}
 \end{aligned}$$

Write 9 in the hundreds column.

Step 4. Multiply 1 thousand by 4.

$$1 \times 4 = 4 \text{ thousand}$$

Write 4 in the thousands column.

$$\text{Thus, } 1234 \times 4 = 4936$$

(b) **Step 1.** Multiply 9 ones by 3.

$$\begin{aligned}
 9 \times 3 &= 27 \text{ ones} \\
 &= 2 \text{ tens } 7 \text{ ones}
 \end{aligned}$$

T	T	H	T	O
	(1)	(2)	(2)	
6	1	6	9	
			3	
1	8	5	0	7

Write 7 in the ones column and carry 2 to the tens column.

Step 2. Multiply 6 tens by 3.

$$\begin{aligned}
 6 \times 3 &= 18 \text{ tens and } 18 \text{ tens} + 2 \text{ tens} \\
 &\text{(carried over)} \\
 &= 20 \text{ tens} = 2 \text{ hundreds } 0 \text{ tens}
 \end{aligned}$$

Write 0 in the tens column and carry 2 to the hundreds column.

Step 3. Multiply 1 hundred by 3.

$$1 \times 3 = 3 \text{ hundreds and } 3 \text{ hundreds} + 2 \text{ hundred (carried over)} = 5 \text{ hundreds}$$

Write 5 in the hundreds column.

Step 4. Multiply 6 thousands by 3.

$$6 \times 3 = 18 \text{ thousands}$$

Write 8 in the thousands column and carry 1 to the ten thousands column.

$$\text{Thus, } 6169 \times 3 = 18507.$$

$$(c) \begin{array}{r} \begin{array}{ccccc} \text{Th} & \text{H} & \text{T} & \text{O} \\ \hline 1 & 1 \\ 2 & 3 & 4 & 1 \\ \hline \end{array} \\ \times \begin{array}{c} \\ \\ \end{array} \\ \hline \begin{array}{c} 9 & 3 & 6 & 4 \end{array} \end{array}$$

$$(d) \begin{array}{r} \begin{array}{ccccc} \text{TTh} & \text{Th} & \text{H} & \text{T} & \text{O} \\ \hline 4 & 2 \\ 7 & 6 & 4 & 1 \\ \hline \end{array} \\ \times \begin{array}{c} \\ \\ \end{array} \\ \hline \begin{array}{c} 5 & 3 & 4 & 8 & 7 \end{array} \end{array}$$

$$(e) \begin{array}{r} \begin{array}{ccccc} \text{TTh} & \text{Th} & \text{H} & \text{T} & \text{O} \\ \hline 8 & 7 \\ 9 & 8 & 1 & 1 \\ \hline \end{array} \\ \times \begin{array}{c} \\ \\ \end{array} \\ \hline \begin{array}{c} 8 & 8 & 2 & 9 & 9 \end{array} \end{array}$$

$$(f) \begin{array}{r} \begin{array}{ccccc} \text{TTh} & \text{Th} & \text{H} & \text{T} & \text{O} \\ \hline 3 & 3 & 2 \\ 8 & 7 & 6 & 5 \\ \hline \end{array} \\ \times \begin{array}{c} \\ \\ \end{array} \\ \hline \begin{array}{c} 4 & 3 & 8 & 2 & 5 \end{array} \end{array}$$

$$(g) \begin{array}{r} \begin{array}{ccccc} \text{TTh} & \text{Th} & \text{H} & \text{T} & \text{O} \\ \hline 7 & 6 & 5 & 3 \\ 9 & 8 & 7 & 4 \\ \hline \end{array} \\ \times \begin{array}{c} \\ \\ \end{array} \\ \hline \begin{array}{c} 7 & 8 & 9 & 9 & 2 \end{array} \end{array}$$

$$(h) \begin{array}{r} \begin{array}{ccccc} \text{TTh} & \text{Th} & \text{H} & \text{T} & \text{O} \\ \hline 5 & 4 & 2 \\ 6 & 8 & 7 & 4 \\ \hline \end{array} \\ \times \begin{array}{c} \\ \\ \end{array} \\ \hline \begin{array}{c} 4 & 1 & 2 & 4 & 4 \end{array} \end{array}$$

Practice Time 3B

1. **Step 1.** Write the multiplicand 248 and multiplier 27 in proper place value columns.

$$\begin{array}{r} \begin{array}{ccccc} \text{Th} & \text{H} & \text{T} & \text{O} \\ \hline & & 1 \\ & & 3 & 5 \\ & 2 & 4 & 8 \\ \hline \end{array} \\ \times \begin{array}{c} \\ \\ 2 & 7 \\ \\ \end{array} \\ \hline \begin{array}{c} 1 & 7 & 3 & 6 \\ + 4 & 9 & 6 & 0 \\ \hline 6 & 6 & 9 & 6 \end{array} \end{array}$$

Multiplicand
Multiplier
 248×7 ones
 248×2 tens
Product

Step 2. Multiply 248 by 7 ones.

$$248 \times 7 = 1736 \text{ ones}$$

Step 3. Multiply 248 by 2 tens.

$$248 \times 2 \text{ tens} = 4960 \text{ ones}$$

Step 4. Add both partial products.

$$1736 + 4960 = 6696$$

Thus, $248 \times 27 = 6696$.

2.
$$\begin{array}{r} \begin{array}{ccccc} \text{TTh} & \text{Th} & \text{H} & \text{T} & \text{O} \\ \hline & & 3 & 0 & 1 \\ & & 5 & 9 \\ \hline & 2 & 7 & 0 & 9 \\ \hline \end{array} \\ \times \begin{array}{c} \\ \\ \\ \end{array} \\ \hline \begin{array}{c} 1 & 7 & 7 & 5 & 9 \end{array} \end{array}$$

Multiplicand
Multiplier
 301×9 ones
 301×5 tens
Product

$$3. \begin{array}{r} \begin{array}{ccccc} \text{Th} & \text{H} & \text{T} & \text{O} \\ \hline & & 5 & 4 & 3 \\ & & 1 & 8 \\ \hline & 4 & 3 & 4 & 4 \\ + & 5 & 4 & 3 & 0 \\ \hline & 9 & 7 & 7 & 4 \end{array} \end{array}$$

$$4. \begin{array}{r} \begin{array}{ccccc} \text{TTh} & \text{Th} & \text{H} & \text{T} & \text{O} \\ \hline & & 1 & 4 & 9 & 5 \\ & & 6 & 4 \\ \hline & 5 & 9 & 8 & 0 \\ + & 8 & 9 & 7 & 0 & 0 \\ \hline & 9 & 5 & 6 & 8 & 0 \end{array} \end{array}$$

$$5. \begin{array}{r} \begin{array}{ccccc} \text{L} & \text{TTh} & \text{Th} & \text{H} & \text{T} & \text{O} \\ \hline & & 2 & 4 & 3 & 2 \\ & & 5 & 8 \\ \hline & 1 & 9 & 4 & 5 & 6 \\ + & 1 & 2 & 1 & 6 & 0 & 0 \\ \hline & 1 & 4 & 1 & 0 & 5 & 6 \end{array} \end{array}$$

$$6. \begin{array}{r} \begin{array}{ccccc} \text{L} & \text{TTh} & \text{Th} & \text{H} & \text{T} & \text{O} \\ \hline & & 3 & 0 & 4 & 6 \\ & & 4 & 2 \\ \hline & 6 & 0 & 9 & 2 \\ + & 1 & 2 & 1 & 8 & 4 & 0 \\ \hline & 1 & 2 & 7 & 9 & 3 & 2 \end{array} \end{array}$$

$$7. \begin{array}{r} \begin{array}{ccccc} \text{L} & \text{TTh} & \text{Th} & \text{H} & \text{T} & \text{O} \\ \hline & & 4 & 0 & 7 & 8 \\ & & 3 & 7 \\ \hline & 2 & 8 & 5 & 4 & 6 \\ + & 1 & 2 & 2 & 3 & 4 & 0 \\ \hline & 1 & 5 & 0 & 8 & 8 & 5 \end{array} \end{array}$$

Practice Time 3C

1. Expand the multiplier 249 and start multiplying by using the following steps:

$$\begin{array}{r} \begin{array}{ccccc} \text{TTh} & \text{Th} & \text{H} & \text{T} & \text{O} \\ \hline & & 3 & 2 & 5 \\ & & 2 & 4 & 9 \\ \hline & 2 & 9 & 2 & 5 \\ + & 1 & 3 & 0 & 0 & 0 \\ \hline & 6 & 5 & 0 & 0 & 0 \\ \hline & 8 & 0 & 9 & 2 & 5 \end{array} \end{array}$$

200 + 40 + 9
 325×9
 325×40
 325×200
Product

Step 1. Multiply 325 by 9 ones.

$$325 \times 9 = 2925$$

Step 2. Multiply 325 by 4 tens.

$$325 \times 40 = 13000$$

Step 3. Multiply 325 by 2 hundreds.

$$325 \times 200 = 65000$$

Step 4. Add the partial products.

$$2925 + 13000 + 65000 = 80925$$

Thus, $325 \times 249 = 80925$.

2. Expand the multiplier 413 and start multiplying by using the following steps:

$$\begin{array}{r} \begin{array}{ccccc} \text{L} & \text{TTh} & \text{Th} & \text{H} & \text{T} & \text{O} \\ \hline & & & 7 & 0 & 9 \\ & & & 4 & 1 & 3 \\ \hline & & & 2 & 1 & 2 & 7 \\ & & & 7 & 0 & 9 & 0 \\ \hline & 2 & 8 & 3 & 6 & 0 & 0 \\ \hline & 2 & 9 & 2 & 8 & 1 & 7 \end{array} \end{array}$$

400 + 10 + 3
 709×3
 709×10
 709×400
Product

Detailed Solutions

Step 1. Multiply 709 by 3 ones.

$$709 \times 3 = 2127 \text{ ones}$$

Step 2. Multiply 709 by 1 ten.

$$709 \times 10 = 7090$$

Step 3. Multiply 709 by 4 hundreds.

$$709 \times 400 = 283600$$

Step 4. Add the partial products.

$$2127 + 7090 + 283600 = 292817$$

Thus, $709 \times 413 = 292817$.

3.

TTh	Th	H	T	O
		3	7	2
\times		1	6	5
		1	8	6
		2	2	3
		3	7	2
		6	1	3

$\begin{array}{r} 372 \\ \times 165 \\ \hline 1860 \\ 3720 \\ \hline 61380 \end{array}$

100 + 60 + 5 \rightarrow 372 \times 5
372 \times 60 \rightarrow Product
372 \times 100 \rightarrow 372 \times 100

Thus, $372 \times 165 = 61380$

4.

TTh	Th	H	T	O
		2	4	8
\times		4	0	3
		7	4	4
		0	0	0
		9	9	2
		9	9	4

400 + 0 + 3 \rightarrow 248 \times 3
248 \times 0 \rightarrow Product
248 \times 400 \rightarrow 248 \times 400

Thus, $248 \times 403 = 99944$

5.

TTh	Th	H	T	O
		2	7	3
\times		3	0	4
		1	0	9
		0	0	0
		8	1	9
		8	2	9

300 + 0 + 4 \rightarrow 273 \times 4
273 \times 0 \rightarrow Product
273 \times 300 \rightarrow 273 \times 300

Thus, $273 \times 304 = 82992$

6.

L	TTh	Th	H	T	O
			5	0	4
\times			3	3	2
			1	0	0
			1	5	1
			1	6	7

300 + 30 + 2 \rightarrow 504 \times 2
504 \times 30 \rightarrow 504 \times 300
504 \times 300 \rightarrow Product

Thus, $504 \times 332 = 167328$

7.

TTh	Th	H	T	O
			5	5
\times		1	2	5
		2	7	5
		1	1	0
		5	5	0
		6	9	5

100 + 20 + 5 \rightarrow 555 \times 5
555 \times 20 \rightarrow 555 \times 100
555 \times 100 \rightarrow Product

Thus, $555 \times 125 = 69375$

8.

L	TTh	Th	H	T	O
			5	8	9
\times			2	5	1
			5	8	9
			2	9	4
			1	1	7
			1	4	7

200 + 50 + 1 \rightarrow 589 \times 1
589 \times 50 \rightarrow 589 \times 200
589 \times 200 \rightarrow Product

Thus, $589 \times 251 = 147839$

Think and Answer (Page 59)

\because 1 bundle contains 100 notes

\therefore 17 bundles contain $17 \times 100 = 1700$ notes.

\therefore 1700 notes of ₹10 each will amount to $1700 \times ₹10 = ₹17000$.

Practice Time 3D

1. (a) $37 \times 10 = 370$ (b) $268 \times 100 = 26800$

(c) $3412 \times 30 = 102360$ (d) $93 \times 1000 = 93000$

(e) $246 \times 10 = 2460$ (f) $43 \times 400 = 17200$

2. (a) $372 \times 20 = 7440$ (b) $45 \times 30 = 1350$

(c) $578 \times 40 = 23120$ (d) $478 \times 800 = 382400$

(e) $274 \times 100 = 27400$ (f) $372 \times 2000 = 744000$

(g) $278 \times 300 = 83400$ (h) $48 \times 4000 = 192000$

Think and Answer (Page 60)

1. 5×8 tens $= 5 \times 80 = 400$

2. $250 \times 4 \times 4 = 1000 \times 4 = 4000$

3. $1001 \times 10 = 10010$; The number of zeros are 3

4. Cost of one book $= ₹180$

Cost of 100 books $= ₹180 \times 100 = ₹18000$

Practice Time 3E

1. (a) $457 \times 0 = 0$ (b) $761 \times 1 = 761$
 (c) $278 \times 1 = 278$ (d) $321 \times 1 = 321$
 (e) $3241 \times 0 = 0$ (f) $48 \times 165 = 165 \times 48$
 (g) $432 \times 522 = 522 \times 432$
 (h) $169 \times 215 = 215 \times 169$

(i) $12 \times (16 \times 19) = (12 \times 16) \times 19$
 (j) $62 \times (93 \times 49) = (62 \times 93) \times 49$
 (k) $27 \times (9 + 15) = (27 \times 9) + (27 \times 15)$
 (l) $102 \times (100 + 58) = (102 \times 100) + (102 \times 58)$

2. (a) – (iv) (b) – (iii)
 (c) – (i) (d) – (v)
 (e) – (ii)

Practice Time 3F

1. (a)

Th	H	T	O		Th	H	T	O	
		7	8	----->			8	0	-----<
		8	2	----->			8	0	-----<
				----->			6	4	00

Actual product = $78 \times 82 = 6396$

(b)

Th	H	T	O		Th	H	T	O	
		4	2	----->			4	0	-----<
		6	8	----->			7	0	-----<
				----->			2	8	00

Actual product = 2856

(c)

TTh	Th	H	T	O		TTh	Th	H	T	O	
		3	9	7	----->			4	0	0	-----<
			2	6	----->			3	0	0	-----<
				----->			1	2	0	0	0

Actual product = 10322

(d)

Th	H	T	O		Th	H	T	O	
	2	5	4	----->		2	5	0	-----<
		1	4	----->			1	0	-----<
				----->			2	5	00

Actual product = 3556

(e)

L	TTh	Th	H	T	O		L	TTh	Th	H	T	O	
			4	2	7	----->				4	3	0	-----<
			2	6	8	----->				2	7	0	-----<
						----->			1	1	6	1	00

Actual product = 114436

(f)

L	TTh	Th	H	T	O		L	TTh	Th	H	T	O	
			3	3	1	----->				3	3	0	-----<
			5	2	7	----->				5	3	0	-----<
						----->			1	7	4	9	00

Actual product = 174437

2. (a)

TTh	Th	H	T	O		TTh	Th	H	T	O	
		1	7	6	----->			2	0	0	-----<
		2	4	8	----->			2	0	0	-----<
					----->			4	0	0	0

Actual product = 43648

Detailed Solutions

(b)

L	TTh	Th	H	T	O
			3	2	5
×			6	7	8

L	TTh	Th	H	T	O
			3	0	0
			7	0	0
			2	1	0

Actual product = 220350

(c)

TTh	Th	H	T	O
			9	0
×			6	2
			7	

TTh	Th	H	T	O
			1	0
			6	0
			6	0

Actual product = 56430

(d)

L	TTh	Th	H	T	O
			2	3	5
×			7	6	8

L	TTh	Th	H	T	O
			2	0	0
			8	0	0
			1	6	0

Actual product = 180480

(e)

L	TTh	Th	H	T	O
			5	5	4
×			6	5	4

L	TTh	Th	H	T	O
			6	0	0
			7	0	0
			4	2	0

Actual product = 362316

(f)

TTh	Th	H	T	O
			2	0
×			3	2

TTh	Th	H	T	O
			2	0
			3	0
			6	0

Actual product = 65280

Practice Time 3G

1. Cost of one earring = ₹64

Total cost of 99 earrings = ₹64 × 99 = ₹6336

TTh	Th	H	T	O
			6	4
×			9	9
			5	7
+			5	7
₹			6	3
			3	6

Thus, the cost of 99 earrings is ₹6336

2. Price of one book = ₹98

Price of 485 books = 485 × 98 = ₹47530

TTh	Th	H	T	O
			4	8
×			9	8
			3	8
+			4	3
₹			4	7
			5	3
			0	0

Thus, the cost of 485 earrings is ₹47530

3. Number of passengers who can sit in a bus = 65

Number of passengers who can sit in 435 buses

$$= 435 \times 65 = 28275$$

TTh	Th	H	T	O
			4	3
×			6	5
			2	1
+			2	6
			2	8
			2	7
			5	5

Thus, 28275 passengers can sit in 435 buses.

4. Number of mangoes contained in a box = 144

Number of mangoes contained in 208 boxes

$$= 144 \times 208 = 29952$$

TTh	Th	H	T	O
			1	4
×			2	0
			1	1
+			2	8
			2	9
			9	5
			2	2

Thus, 29952 mangoes are there in 208 boxes.

5. Number of book in one almirah = 353
 Number of books in 234 almirah
 $= 353 \times 234 = 82602$

TT	Th	H	T	O
		3	5	3
\times		2	3	4
		1	4	1
	1	0	5	9
+	7	0	6	0
	8	2	6	0
		2	0	2

Thus, 82602 books can be kept in 234 almirah.

6. The price of one table = ₹1165
 The price of 100 tables = ₹1165 \times 100
 \quad [Add '00' after 1165×1]
 \quad = ₹116500

Thus, the price of 100 tables is ₹116500.

7. Company price of one tricycle = ₹2553
 Price of 200 tricycles = ₹2253 \times 200
 \quad [Add '00' after 2253×2]
 \quad = ₹510600

Thus, the price of 200 tricycles is ₹510600.

8. Packs of playing cards in a box = 500
 Number of playing cards in each pack = 52
 Number of playing cards in the box = 500 \times 52
 \quad [Add '00' after 500×5]

Thus, 26000 playing cards are there in the box.

9. Number of apples in one tree = 195
 Number of apples in 184 trees = 195×184
 \quad = 35880

TT	Th	H	T	O
		1	9	5
\times		1	8	4
		7	8	0
	1	5	6	0
+	1	9	5	0
	3	5	8	8
		0	0	0

Thus, estimated number of apples to the nearest hundred is 35900.

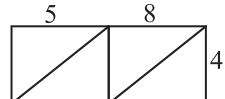
Practice Time 3H

1. Draw a 2×1 table as 58×4 has 2-digit and 1-digit numbers respectively and follow the given steps:

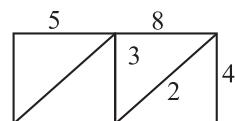
Step 1. Write the two numbers on the top and side of the table as shown.



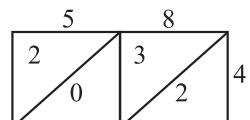
Step 2. Draw the diagonal in each box as shown



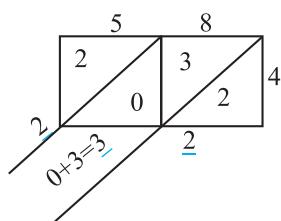
Step 3. Multiply 8 by 4 and write product in the box below 8 as shown.



Step 4. Multiply 5 by 4 and write the product same as before.



Step 5. Add the number of boxes diagonally as shown.

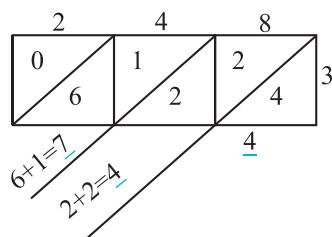


The answer is read from left to right.

Product = 232

Thus, $58 \times 4 = 232$

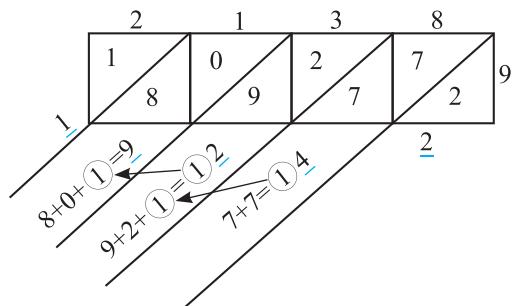
2. Here, we have to multiply a 3-digit number by a 1-digit number, So, we draw 3×1 table as shown and proceed further as above.



Thus, $248 \times 3 = 744$

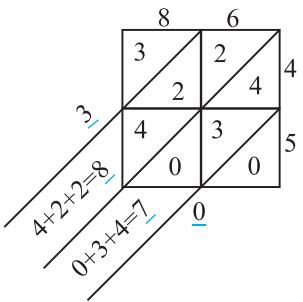
Detailed Solutions

3. Here, we have to multiply a 4-digit number by 1-digit number, so, we draw a 4×1 table and proceed as before.



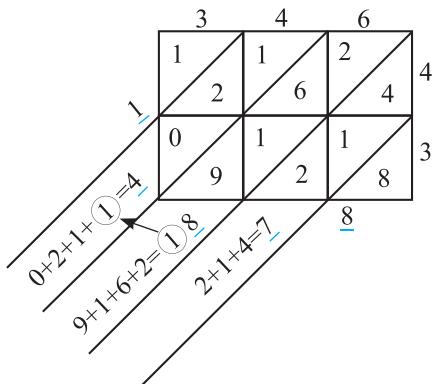
$$\text{Thus, } 2138 \times 9 = 19242$$

4. Here, we have to multiply a 2-digit number by 2-digit number, so, we draw a 2×2 table and proceed as shown alongside.



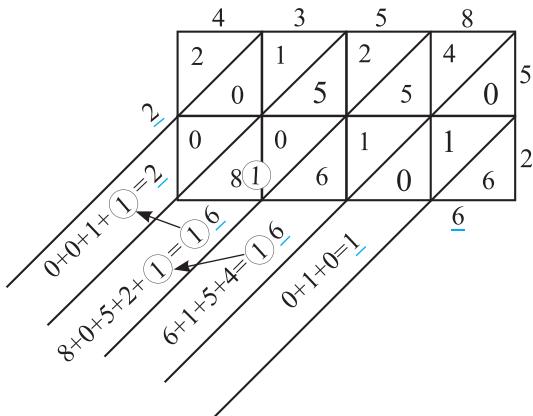
$$\text{Thus, } 86 \times 45 = 3870$$

5. Since, we have to multiply a 3-digit number by a 2-digit, so, we draw a lattice of 3×2 and proceed as shown alongside. The product is 14878.



$$\text{Thus, } 346 \times 43 = 14878$$

6. Here, we have to multiply a 4-digit number by a 2-digit number, so, we draw a 4×2 lattice multiplication and do the process. The product is 226616.



$$\text{Thus, } 4358 \times 52 = 226616.$$

Mental Maths (Page 65)

1. (c); $100 \times 25 \times 0 = 0$
2. (a); $325 \times 48 = 325 \times 40 + 325 \times 8$
3. (b); $48 \times (24 \times 20) = (48 \times 24) \times 20$
4. (c); $9999 \times 1000 = 1000 \times 9999$
5. (a); $65 \times 0 \times 287 = 0$

Brain Sizzlers (Page 66)

TTh	Th	H	T	O	TTh	Th	H	T	O
		A	A	A			1	1	1
		A	A	A			1	1	1
A	B	C	B	A			1	1	0
					1	1	1	0	0
					1	2	3	2	1

$$\text{Thus, } A = 1, B = 2, C = 3$$

Chapter Assessment

1. (a) – (iii); If any number is multiplied by 500, minimum number of zeros will be 2.
- (b) – (ii); 15 notes of ₹500 = ₹7500
20 notes of ₹200 = ₹4000
Total withdrawn money
= ₹7500 + ₹4000 = ₹11,500

TTh	Th	H	T	O	TTh	Th	H	T	O
	2	3	0	7		(1)	(3)		
				A		2	3	0	7
1	1	5	B	5					5
					1	1	5	3	5

- (d) – (iii); $25 \times 140 \times 54$ is not same as $25 \times 8 \times 20 \times 54$
- (e) – (iii); Labourer earns ₹300 daily

5 months 5 days = $5 \times 30 + 5 = 155$ day
Total money earned in 155 days = $155 \times ₹300 = ₹46500$

2. Each sack weighs = 65 kg
 50 sacks weigh = $(65 \times 50) = 3250$ kg
 Total weight of wheat being transported by three trucks = $3250 \times 3 = 9750$ kg
 Thus, 9750 kg of wheat being transported.

3. Number of books printing in a day = 985
 Number of books printing in month of march
 $= 985 \times 31 = 30535$ books
 Thus, total number of books printed in the month of march is 30535.

4. Cost of one toy train = ₹350
 Cost of 7 toy trains = $\text{₹}350 \times 7 = \text{₹}2450$
 Cost of one teddy bear = ₹250
 Cost 7 teddy bears = $\text{₹}250 \times 7 = \text{₹}1750$
 Total amount paid = $\text{₹}2450 + \text{₹}1750 = \text{₹}4200$

5. Distance covered in 1 hour = 252 km
 Distance covered in 15 hours = $252 \times 15 = 3780$ km
 Thus, distance covered in 15 hours is 3780 km.

6. Number of rows = 456
 Number of seats in each row = 20
 Number of seats in the stadium = $456 \times 20 = 9120$
 Thus, there are 9120 seats in the stadium.

7. Average fare collected for each rider of Delhi Metro = ₹40
 Number of people for ride in quarter of an hour = 2599
 Amount of money collected in one hour
 $= 2599 \times 40 \times 4 = \text{₹}415840$
 Thus, ₹415840 was collected in hour.

8. Money each student contributed for flood relief fund = ₹75
 Number of students studying in the school = 2718
 Total amount collected = $2718 \times \text{₹}75 = \text{₹}2,03,850$
 Thus, Total amount collected is ₹2,03,850.

9. Amount of calories in one small bar of chocolate = 235
 Amount of calories in 125 bars of chocolates
 $= 235 \times 125 = 29375$
 Thus, 125 small bars of chocolate contains 29375 calories.
 We should burn 300–500 calories in exercise daily to stay healthy.

10. Number of people in each sector = 600 approx.
 Number of people in 150 sectors = 600×150
 $= 90000$
 Thus, approximate population of city = 90000.

11. Number of sheets in one ream of paper = 500
 Number of sheets in 225 ream of paper
 $= 500 \times 225 = 112500$
 Thus, 112500 sheets are there in 225 such reams.

12. Number of guests = 25
 Number of friends each guest will bring = 2
 Number of guests for Mr. Khurana
 $= 25(1 + 2) = 25 \times 3 = 75$
 Number of momos everyone eats = 7
 Number of momos Mr. Khurana should order
 $= 75 \times 7 = 525$.

13. Total Number of students in art class
 $= 285 \times 2 = 570$
 Cost of each brush = ₹55
 Total cost of brushes = $570 \times \text{₹}55 = \text{₹}31,350$
 Thus, the total cost of brushes is ₹31,350.

14. Cost of apples = ₹120 per kg
 Cost of grapes = ₹178 per kg
 Cost of mangoes = ₹85 per kg
 Cost of oranges = ₹45 per kg
 (a) Cost of 5 kg of grapes = $\text{₹}178 \times 5 = \text{₹}890$
 Cost of 3 kg of mangoes = $\text{₹}85 \times 3 = \text{₹}255$
 Total cost = $\text{₹}(890 + 255) = \text{₹}1145$
 (b) Cost of 8 kg of oranges = $\text{₹}45 \times 8 = \text{₹}360$
 Cost of 4 kg of apples = $\text{₹}120 \times 4 = \text{₹}480$
 Total cost = $\text{₹}(360 + 480) = \text{₹}840$
 (c) Cost of 2 kg of apples = $\text{₹}120 \times 2 = \text{₹}240$
 Cost of 2 kg of grapes = $\text{₹}178 \times 2 = \text{₹}356$
 Cost of 2 kg of mangoes = $\text{₹}85 \times 2 = \text{₹}170$
 Cost of 2 kg of oranges = $\text{₹}45 \times 2 = \text{₹}90$
 Total cost of these items
 $= \text{₹}(240 + 356 + 170 + 90) = \text{₹}856$
 (d) Cost of 2 kg apples = $\text{₹}120 \times 2 = \text{₹}240$
 Cost of 3 kg of oranges = $\text{₹}45 \times 3 = \text{₹}135$
 Cost of 1 kg of grapes = ₹178
 Total cost of these items
 $= \text{₹}(240 + 135 + 178) = \text{₹}553$
 Since, $553 > 500$, she has not enough money to purchase these quantity of fruits.

CHAPTER 4 : DIVISION

Let's Recall

1. (a) To divide 15 by 3, we read the table of 3 till 15.
 $1 \times 3 = 3; 2 \times 3 = 6; 3 \times 3 = 9; 4 \times 3 = 12;$
 $5 \times 3 = 15$ (Stop)
 Thus, $15 \div 3 = 5$.

Detailed Solutions

(b) To divide 64 by 8, we read the table of 8 till 64.

$$\begin{aligned}1 \times 8 &= 8; 2 \times 8 = 16; 3 \times 8 = 24; 4 \times 8 = 32; \\5 \times 8 &= 40; 6 \times 8 = 48; 7 \times 8 = 56; 8 \times 8 = 64\end{aligned}$$

(Stop)

$$\text{Thus, } 64 \div 8 = 8.$$

(c) To divide 81 by 9, we read the table of 9 till 81.

$$\begin{aligned}1 \times 9 &= 9; 2 \times 9 = 18; 3 \times 9 = 27; 4 \times 9 = 36; \\5 \times 9 &= 45; 6 \times 9 = 54; 7 \times 9 = 63; 8 \times 9 = 72; \\9 \times 9 &= 81 \text{ (Stop)}$$

$$\text{Thus, } 81 \div 9 = 9.$$

2. (a) $75 \div 5 = 15; 75 \div 15 = 5$

(b) $480 \div 4 = 120; 480 \div 120 = 4$

(c) $384 \div 48 = 8; 384 \div 8 = 48$

3. (a)

$$\begin{array}{r} \text{Dividend} \\ \text{Divisor} \rightarrow 2 \overline{) 54} (27 \leftarrow \text{Quotient} \\ \underline{- 4} \\ \underline{14} \\ - 14 \\ \underline{0} \leftarrow \text{Remainder} \end{array}$$

Checking: $\text{Quotient} \times \text{Divisor} + \text{Remainder} = 27 \times 2 + 0 = 54 = \text{Dividend}$

Thus, the answer is correct.

(b)

$$\begin{array}{r} \text{Dividend} \\ \text{Divisor} \rightarrow 7 \overline{) 56} (8 \leftarrow \text{Quotient} \\ \underline{- 56} \\ \underline{0} \leftarrow \text{Remainder} \end{array}$$

Checking: $\text{Quotient} \times \text{Divisor} + \text{Remainder} = 8 \times 7 + 0 = 56 = \text{Dividend}$

Thus, the answer is correct.

(c) $\text{Divisor} \rightarrow 3 \overline{) 547} (182 \leftarrow \text{Quotient}$

$$\begin{array}{r} \text{Dividend} \\ \text{Divisor} \rightarrow 3 \overline{) 547} (182 \leftarrow \text{Quotient} \\ \underline{- 3} \\ \underline{24} \\ - 24 \\ \underline{07} \\ - 6 \\ \underline{1} \leftarrow \text{Remainder} \end{array}$$

Checking: $\text{Quotient} \times \text{Divisor} + \text{Remainder} = 182 \times 3 + 1 = 546 + 1 = 547 = \text{Dividend}$

Thus, the answer is correct.

4. Cost of 1 dozen eggs = ₹96

Cost of 1 egg = ₹96 \div 12 = ₹8

$$(\because 1 \text{ dozen} = 12)$$

Thus, cost of 1 egg is ₹8.

Practice Time 4A

$$\begin{array}{r} 9 \overline{) 153} (17 \\ \underline{- 9} \\ \underline{63} \\ - 63 \\ \underline{0} \end{array}$$

Dividend = 153 Divisor = 9
Quotient = 17 Remainder = 0

$$\begin{array}{r} 8 \overline{) 215} (26 \\ \underline{- 16} \\ \underline{55} \\ - 48 \\ \underline{07} \end{array}$$

Dividend = 215 Divisor = 8
Quotient = 26 Remainder = 7

$$\begin{array}{ll} 3. 4216 \div 1 = 4216 & 4. 712 \div 712 = 1 \\ 5. 0 \div 152 = 0 & 6. 0 \div 278 = 0 \\ 7. 0 \div 1024 = 0 & 8. 3247 \div 3247 = 1 \end{array}$$

Quick Check (Page 74)

$$\begin{array}{lll} 1. 6 \overline{) 37126} & 2. 8 \overline{) 502516} & 3. 9 \overline{) 887204} \\ 6 \ 21 & 6 \ 3 \ 2 & 9 \ 800 \ R4 \end{array}$$

Practice Time 4B

1. (a) We write the dividend inside the division brackets and the divisor outside the brackets as shown.

$$\begin{array}{r} 2 \overline{) 5029} (2514 \leftarrow Q \\ \underline{- 4} \\ \underline{10} \\ - 10 \\ \underline{02} \\ - 2 \\ \underline{09} \\ - 8 \\ \underline{1} \leftarrow R \end{array}$$

Step 1. Start dividing from the highest place. Since, 5 $>$ 2. Divide 5 thousands by 2. We have quotient 2 and the remainder 1.

Step 2. Bring down 0 hundreds along with the remainder 1, making it 10 hundred.

Step 3. Divide 10 hundreds by 2. We have quotient 5 and the remainder 0.

Step 4. Bring down tens digit 2 and divide 2 tens by 2. We have quotient 1 and remainder 0.

Step 5. Bring down ones digit 9 and divide 9 ones by 2. We have quotient 4 and remainder 1.

So, the quotient is 2514 and the remainder is 1.

Checking: $\text{Divisor} \times \text{Quotient} + \text{Remainder} = 2 \times 2514 + 1 = 5028 + 1 = 5029 = \text{Dividend}$
So, the answer is correct.

Thus, quotient = 2514 and Remainder = 1.

(b) **Step 1.** Since, $6 < 3$, so, divide 35 hundred by 6. We have, quotient = 5 and remainder = 5.

$$\begin{array}{r} 6) \overline{3536} (589 \leftarrow Q \\ - 30 \\ \hline 053 \\ - 48 \\ \hline 56 \\ - 54 \\ \hline 02 \leftarrow R \end{array}$$

Step 2. Bring down 3 tens along with the remainder 5, making it 53 tens.

Step 3. Divide 53 tens by 6. We have quotient 8 and the remainder 5.

Step 4. Bring down 6 ones along with the remainder 5, making it 56 ones.

Step 5. Divide 56 ones by 6. We have quotient 9 and the remainder 2.

So, the quotient is 589 and the remainder is 2.

Thus, $Q = 589$ and $R = 2$.

(c) to (h) — Do it yourself (same as above)

2. (a) Given, Quotient = 809; Divisor = 6, Dividend = 4858

We know that, Remainder = Dividend – Quotient \times Divisor

$$\text{Remainder} = 4858 - 809 \times 6 = 4858 - 4854 = 4$$

(b) Quotient = 568, Divisor = 5, Dividend = 2843 (Given)

According to formula,

$$\text{Remainder} = \text{Dividend} - \text{Quotient} \times \text{Divisor}$$

$$\text{Remainder} = 2843 - 568 \times 5 = 2843 - 2840 = 3$$

(c) Quotient = 914, Divisor = 9, Dividend = 8234

According to formula,

$$\text{Remainder} = \text{Dividend} - \text{Quotient} \times \text{Divisor}$$

$$\text{Remainder} = 8234 - 914 \times 9 = 8234 - 8226 = 8$$

Practice Time 4C

1. (a) **Step 1.** Since, $3 < 11$, so, divide the first leading partial dividend 30 by 11.

$$\begin{array}{r} 11) \overline{3092} (281 \leftarrow Q \\ - 22 \\ \hline 089 \leftarrow \text{The first leading partial dividend} \\ - 88 \\ \hline 012 \\ - 11 \\ \hline 01 \leftarrow R \end{array}$$

$$\text{Now, } 11 \times 2 = 22 \text{ and } 11 \times 3 = 33$$

As, $22 < 30$ and $33 > 30$

Thus, 11 goes into 30 by two times.

Write 2 at the hundreds place of the quotient and 22 below 30.

Step 2. Subtract 22 from 30 to get 8 as the remainder.

Bring down 9 to make it 89.

Step 3. Divide 89 by 11.

$$\begin{array}{l} 11 \text{ goes into } 89 \text{ by } 8 \text{ times as } 11 \times 8 = \\ 88 < 89 \text{ and } 11 \times 9 = 99 > 89 \end{array}$$

Write 8 at the tens place of the quotient and 88 below 89.

Step 4. Subtract 88 from 89 to get 1 as the remainder. Bring down 2 to make it 12.

Step 5. Divide 12 by 11.

$$\begin{array}{l} 11 \text{ goes into } 12 \text{ by } 1 \text{ time as } 11 \times 1 = \\ 11 < 12 \text{ and } 11 \times 2 = 22 > 12 \end{array}$$

Step 6. Subtract 11 from 12 to get 1 as the remainder.

Thus, $Q = 281$ and $R = 1$

Checking: Quotient \times Divisor + Remainder

$$\begin{array}{l} = 281 \times 11 + 1 \\ = 3091 + 1 = 3092 = \text{Dividend} \end{array}$$

Thus, the answer is correct.

(b) **Step 1.** Since, $2 < 14$, so, divide the first leading partial 14 dividend 29 by 14.

$$\begin{array}{r} 14) \overline{2974} (212 \\ - 28 \\ \hline 017 \leftarrow \text{The first leading partial dividend} \\ - 14 \\ \hline 34 \\ - 28 \\ \hline 06 \end{array}$$

$$\text{Now, } 14 \times 2 = 28 \text{ and } 14 \times 3 = 42$$

$$\text{As, } 28 < 29, 42 > 29.$$

Thus, 14 goes into 29 by two times.

Write 2 at the hundreds place of the quotient and 28 below 29.

Step 2. Subtract 28 from 29 to get 1 as the remainder.

Bring down 7 to make it 17.

Step 3. Divide 17 by 14.

$$\begin{array}{l} 14 \text{ goes into } 17 \text{ by } 1 \text{ time as } 14 \times 1 = \\ 14 < 17 \text{ and } 14 \times 2 = 28 > 17 \end{array}$$

Write 1 at the tens place of the quotient and 14 below 17.

Detailed Solutions

Step 4. Subtract 14 from 17 to get 3 as the remainder. Bring down 4 to make it 34.

Step 5. Divide 34 by 14.

14 goes into 34 by 2 times as $14 \times 2 = 28 < 34$ and $14 \times 3 = 42 > 34$

Step 6. Subtract 28 from 34 to get 6 as the remainder.

Thus, $Q = 212$ and $R = 6$

Checking: Quotient \times Divisor + Remainder

$$\begin{aligned} &= 212 \times 14 + 6 \\ &= 2968 + 6 = 2974 = \text{Dividend} \end{aligned}$$

Thus, the answer is correct.

(c) to (h) — Do it yourself (same as above)

2. (a) $7256 \div 12$

$$\begin{array}{r} 12 \overline{)7256} (604 \leftarrow Q \\ -72 \\ \hline 056 \\ -48 \\ \hline 08 \leftarrow R \end{array}$$

Thus, $Q = 604$, $R = 8$

(b) $5872 \div 18$

$$\begin{array}{r} 18 \overline{)5872} (326 \leftarrow Q \\ -54 \\ \hline 47 \\ -36 \\ \hline 112 \\ -108 \\ \hline 4 \leftarrow R \end{array}$$

Thus, $Q = 326$, $R = 4$

(c) $3897 \div 63$

$$\begin{array}{r} 63 \overline{)3897} (61 \leftarrow Q \\ -378 \\ \hline 117 \\ -63 \\ \hline 54 \leftarrow R \end{array}$$

Thus, $Q = 61$, $R = 54$

(d) $8775 \div 21$

$$\begin{array}{r} 21 \overline{)8775} (417 \leftarrow Q \\ -84 \\ \hline 037 \\ -21 \\ \hline 165 \\ -147 \\ \hline 18 \leftarrow R \end{array}$$

Thus, $Q = 417$, $R = 18$

(e) $25284 \div 14$

$$\begin{array}{r} 14 \overline{)25284} (1806 \leftarrow Q \\ -14 \\ \hline 112 \\ -112 \\ \hline 084 \\ -84 \\ \hline 0 \leftarrow R \end{array}$$

Thus, $Q = 1806$, $R = 0$

(f) $29045 \div 28$

$$\begin{array}{r} 28 \overline{)29045} (1037 \leftarrow Q \\ -28 \\ \hline 0104 \\ -84 \\ \hline 205 \\ -196 \\ \hline 009 \leftarrow R \end{array}$$

Thus, $Q = 1037$, $R = 9$

(g) $13207 \div 17$

$$\begin{array}{r} 17 \overline{)13207} (776 \leftarrow Q \\ -119 \\ \hline 0130 \\ -119 \\ \hline 0117 \\ -102 \\ \hline 15 \leftarrow R \end{array}$$

Thus, $Q = 776$, $R = 15$

(h) $28700 \div 26$

$$\begin{array}{r} 26 \overline{)28700} (1103 \leftarrow Q \\ -26 \\ \hline 27 \\ -26 \\ \hline 100 \\ -78 \\ \hline 022 \leftarrow R \end{array}$$

Thus, $Q = 1103$, $R = 22$

Practice Time 4D

1. $78 \div 10$

$$\begin{array}{r} 10 \overline{)78} (7 \\ -70 \\ \hline 08 \end{array}$$

$Q = 7$, $R = 8$

2. $420 \div 10$

$$\begin{array}{r} 10 \overline{)420} (42 \\ -40 \\ \hline 20 \\ -20 \\ \hline 0 \end{array}$$

$Q = 42$, $R = 0$

3. $936 \div 100$

$$\begin{array}{r} 100 \) 936 \\ \underline{-900} \\ \underline{36} \end{array}$$

Q = 9, R = 36

5. $2365 \div 100$

$$\begin{array}{r} 100 \) 2365 \\ \underline{-200} \\ \underline{0365} \\ -300 \\ \underline{065} \end{array}$$

Q = 23, R = 65

7. $5064 \div 1000$

$$\begin{array}{r} 1000 \) 5064 \\ \underline{-5000} \\ \underline{0064} \end{array}$$

Q = 5, R = 64

9. $13655 \div 1000$

$$\begin{array}{r} 1000 \) 13655 \\ \underline{-1000} \\ \underline{3655} \\ -3000 \\ \underline{0655} \end{array}$$

Q = 13, R = 655

11. $99867 \div 1000$

$$\begin{array}{r} 1000 \) 99867 \\ \underline{-9000} \\ \underline{09867} \\ -9000 \\ \underline{867} \end{array}$$

Q = 99, R = 867

4. $2796 \div 10$

$$\begin{array}{r} 10 \) 2796 \\ \underline{-20} \\ \underline{079} \\ -70 \\ \underline{096} \\ -90 \\ \underline{06} \end{array}$$

Q = 279, R = 6

6. $23708 \div 100$

$$\begin{array}{r} 100 \) 23708 \\ \underline{-200} \\ \underline{0370} \\ -300 \\ \underline{0708} \\ -700 \\ \underline{008} \end{array}$$

Q = 237, R = 8

8. $2033 \div 1000$

$$\begin{array}{r} 1000 \) 2033 \\ \underline{-2000} \\ \underline{0033} \end{array}$$

Q = 2, R = 33

10. $23009 \div 1000$

$$\begin{array}{r} 1000 \) 23009 \\ \underline{-2000} \\ \underline{03009} \\ -3000 \\ \underline{0009} \end{array}$$

Q = 23, R = 9

12. $101568 \div 1000$

$$\begin{array}{r} 1000 \) 101568 \\ \underline{-1000} \\ \underline{001568} \\ -1000 \\ \underline{568} \end{array}$$

Q = 101, R = 568

Practice Time 4E

1. (a) (ii) \because 93 rounded off to the nearest tens is 90 and 27 rounded off to the nearest tens is 30 $\therefore 90 \div 30 = 3$

(b) (iv) \because 903 rounded off to the nearest hundreds is 900 and 62 rounded off to the nearest tens is 60

$$\therefore 900 \div 60 = 15$$

(c) (iii) \because 573 rounded off to the nearest hundreds

is 600 and 61 rounded off to the nearest tens is 60

$$\therefore 600 \div 60 = 10$$

(d) (i) \because 305 rounded off to the nearest hundreds is 300 and 63 rounded off to the nearest tens is 60

$$\therefore 300 \div 60 = 5$$

2. (a) 88 rounded off to the nearest tens is 90.

34 rounded off to the nearest tens is 30.

Estimated quotient

$$\begin{array}{r} 30 \) 90 \\ \underline{-90} \\ \underline{0} \end{array}$$

$$90 \div 30 = 3$$

Thus, the estimated quotient = 3.

(b) 257 rounded off to the nearest hundreds is 300.

28 rounded off to the nearest tens is 30.

Estimated quotient

$$\begin{array}{r} 30 \) 300 \\ \underline{-30} \\ \underline{00} \\ -00 \\ \underline{0} \end{array}$$

$$300 \div 30 = 10$$

Thus, the estimated quotient = 10.

(c) and (d) — Do it yourself (same as above)

(e) 2402 rounded off to the nearest thousands is 2000.

44 rounded off to the nearest tens is 40.

Estimated quotient

$$\begin{array}{r} 40 \) 2000 \\ \underline{-200} \\ \underline{00} \\ -00 \\ \underline{0} \end{array}$$

$$2000 \div 40 = 50$$

Thus, the estimated quotient = 50.

(f) to (h) — Do it yourself (same as above)

Think and Answer (Page 81)

In 60 seconds hummingbird flap wings
= 4800 times

In 20 seconds hummingbird flap wings
= $(4800 \div 60) \times 20 = 80 \times 20 = 1600$ times.

Detailed Solutions

Practice Time 4F

1. Cost of one pen = ₹8

Total amount = ₹472

Number of pens can be bought

$$= \frac{472}{8} = 59 \text{ pens}$$

Thus, 59 pens can be bought for ₹472

$$\begin{array}{r} 8 \longdiv{472} (59) \\ \underline{-40} \\ \underline{\underline{72}} \end{array}$$

2. Total number of pages = 1224

Number of notebooks = 12

Number of pages in each notebook

$$= \frac{1224}{12} = 102$$

Thus, number of pages in each notebook is 102.

$$\begin{array}{r} 12 \longdiv{1224} (102) \\ \underline{-12} \\ \underline{\underline{024}} \\ \underline{0} \end{array}$$

3. Total number of students = 812

Number of groups = 14

Number of students in each group

$$= \frac{812}{14} = 58$$

Thus, number of students in each group is 58.

$$\begin{array}{r} 14 \longdiv{812} (58) \\ \underline{-70} \\ \underline{\underline{112}} \\ \underline{0} \end{array}$$

4. Total number of balls = 690

Number of boxes = 30

Number of ball in each box

$$= \frac{690}{30} = 23$$

Thus, number of balls in each box is 23.

$$\begin{array}{r} 30 \longdiv{690} (23) \\ \underline{-60} \\ \underline{\underline{90}} \\ \underline{0} \end{array}$$

5. Greatest 4-digit number = 9999

Greatest 2-digit number = 99

$$\text{And, } 9999 \div 99 = 101$$

Thus, here we get **no** remainder.

$$\begin{array}{r} 99 \longdiv{9999} (101) \\ \underline{-99} \\ \underline{\underline{099}} \\ \underline{0} \end{array}$$

6. Total number of chairs = 3657

Number of rows = 80

Number of chairs in each row

$$= \frac{3657}{80}$$

$$\Rightarrow Q = 45 \text{ and } R = 57$$

Thus, number of chairs in each row is 45 and 57 chairs are left

$$\begin{array}{r} 80 \longdiv{3657} (45) \\ \underline{-320} \\ \underline{\underline{457}} \\ \underline{400} \\ \underline{\underline{57}} \end{array}$$

7. Total number of book in the library = 4008

Number of shelves = 24

Number of books in each shelf

$$= \frac{4008}{24} = 167$$

Thus, number of books in each shelf is 167.

$$\begin{array}{r} 24 \longdiv{4008} (167) \\ \underline{-48} \\ \underline{\underline{168}} \\ \underline{168} \\ \underline{0} \end{array}$$

8. Total amount with Gyan

$$= ₹56,488$$

Amount given to Suhana =

$$\begin{array}{r} 56488 \\ -16 \\ \hline 40 \end{array}$$

$$= 56,488 \div 2 = 28,244$$

$$\begin{array}{r} 28244 \\ -16 \\ \hline 08 \end{array}$$

$$\begin{array}{r} 08 \\ -8 \\ \hline 0 \end{array}$$

$$= ₹28,244$$

$$\begin{array}{r} 2 \longdiv{56488} (28244) \\ \underline{-4} \\ \underline{\underline{16}} \\ \underline{04} \\ \underline{\underline{4}} \\ \underline{08} \\ \underline{08} \\ \underline{0} \end{array}$$

Estimated amount = ₹30000

Thus, Gyan has approximately ₹30,000 left with him.

9. Number of notebooks sold in first month

$$= 255 \text{ dozens} = 255 \times 12 = 3060$$

Number of notebooks sold in second month

$$= 325 \text{ dozens} = 325 \times 12 = 3900$$

Difference in sales of notebooks

$$= 3900 - 3060 = 840 \text{ notebooks}$$

Thus, in the second month he sold **840** notebooks more.

10. Number of apples = 235

$$\begin{array}{r} 25 \longdiv{541} (21) \\ \underline{-50} \\ \underline{\underline{41}} \\ \underline{25} \\ \underline{16} \end{array}$$

$$\text{Number of pears} = 184$$

$$\text{Number of oranges} = 122$$

$$\text{Total number of fruits} =$$

$$= 235 + 184 + 122 = 541$$

Number of fruits in each basket = 25

$$\text{Number of baskets required} = 541 \div 25$$

Thus, she makes 21 baskets and 16 fruits are left over.

Mental Maths (Page 82)

1. (b); $8000 \div 100 = 80$;

$$\begin{array}{r} 100 \longdiv{8000} (80) \\ \underline{-800} \\ \underline{\underline{00}} \\ \underline{00} \end{array}$$

2. (a); $\text{Divisor} \times \text{Quotient} + \text{Remainder} = \text{Dividend}$

3. (d); Double of a number = 1020

So, the number itself = $1020 \div 2 = 510$

So, half of the number = $510 \div 2 = 255$

4. (c); 999 is the quotient when 9999 is divided by 10.

$$\begin{array}{r} 10 \longdiv{9999} (999 \leftarrow Q) \\ \underline{-90} \\ \underline{\underline{99}} \\ \underline{90} \\ \underline{\underline{99}} \\ \underline{90} \\ \underline{\underline{09}} \leftarrow R \end{array}$$

5. (a); We cannot divide a number by 0.

Chapter Assessment

1. (a) – (i); Divide 1331 by 11.

$$\begin{array}{r} 11 \overline{)1331} (121 \\ \underline{-11} \\ \underline{23} \\ - \underline{22} \\ \underline{011} \\ - \underline{11} \\ \underline{0} \end{array}$$

Thus, the remainder is 0

(b) – (ii); The largest remainder possible on dividing a number by 17 is 16.

(c) – (iv); $232323 \div 23 = 10101$.

$$\begin{array}{r} 23 \overline{)232323} (10101 \\ \underline{-23} \\ \underline{023} \\ - \underline{23} \\ \underline{023} \\ - \underline{23} \\ \underline{0} \end{array}$$

(d) – (ii); $112 \div 7 = 16$ and remainder is 0.

$$\begin{array}{r} 7 \overline{)112} (16 \\ \underline{-7} \\ \underline{42} \\ - \underline{42} \\ \underline{0} \end{array}$$

2. (a) False; A number divided by itself gives 1.

Let the number be 25. Then,

$$25 \div 25 = 1 \neq 0$$

(b) False; 0 divided by any number always gives 0.

Let the number be 5. Then $0 \div 5 = 0$

(c) False;

The quotient may be greater than the divisor.

Let the dividend be 15 and divisor be 3.

According to question

$$\begin{array}{r} 3 \overline{)15} (5 \\ \underline{-15} \\ \underline{0} \end{array}$$

Here, quotient $5 >$ divisor (3).

(d) False; A number divided by itself always gives one (1).

Division by 1 is possible

$$\left(\because \frac{6}{1} = 6 \right)$$

(e) True;

Quotient = 4, Divisor = 9 and Remainder = 5

Dividend = Quotient \times Divisor + Remainder

$$41 = 4 \times 9 + 5$$

$$41 = 41$$

Thus, statement is true.

(f) False.

$$\begin{array}{r} 100 \overline{)4007} (40 \leftarrow Q \\ \underline{-400} \\ \underline{07} \leftarrow R \end{array}$$

$$4007 \div 100$$

$$Q = 40, R = 7$$

3.

Question	Rounds to 10	Actual Q and R	Estimated Q and R
(a) $81 \div 18$	$80 \div 20$	4, 9	4, 0
(b) $56 \div 23$	$60 \div 20$	2, 10	3, 0
(c) $312 \div 59$	$310 \div 60$	5, 17	5, 10
(d) $681 \div 53$	$680 \div 50$	12, 45	13, 30
(e) $691 \div 51$	$690 \div 50$	13, 28	13, 40

4. Total number of crayons = 6398

Number of crayons in each packet = 24

Number of packets = $6398 \div 24$

$$\begin{array}{r} 24 \overline{)6398} (266 \leftarrow Q \\ \underline{-48} \\ \underline{159} \\ - \underline{144} \\ \underline{0158} \\ - \underline{144} \\ \underline{14} \leftarrow R \end{array}$$

$$\Rightarrow Q = 266 \text{ and } R = 14$$

Thus, number of packet is 266 and 14 crayons are left over.

5. Product of two numbers = 9823

Smaller number = 47

$$47 \overline{)9823} (209$$

Bigger number = $9823 \div 47$

$$\begin{array}{r} 47 \overline{)9823} (209 \\ \underline{-94} \\ \underline{423} \\ - \underline{423} \\ \underline{0} \end{array}$$

Thus, bigger number is 209.

6. Distance covered by aeroplane in 18 hours

$$= 9396 \text{ km}$$

Distance covered by aeroplane in 1 hour

$$= 9396 \div 18$$

$$\begin{array}{r} 18 \overline{)9396} (522 \\ \underline{-90} \\ \underline{39} \\ - \underline{36} \\ \underline{036} \\ - \underline{36} \\ \underline{0} \end{array}$$

Thus, aeroplane flies 522 km in one hour.

7. Required distance to travel by participants of cycle race in 12 laps = 2700 m
 Required distance to travel by participants of cycle race in 1 lap = $(2700 \div 12)$ m

$$\begin{array}{r} 12) 2700 (225 \\ - 24 \\ \hline 030 \\ - 24 \\ \hline 060 \\ - 60 \\ \hline 0 \end{array}$$

Thus, 225 m should be covered in each lap.

8. (a) $\begin{array}{r} 6) 70845 (1 \boxed{1} \boxed{8} \boxed{0} \boxed{7} \\ - 6 \\ \hline 10 \\ - 6 \\ \hline 48 \\ - 48 \\ \hline 045 \\ - 42 \\ \hline 3 \end{array}$

(b) $\begin{array}{r} 8) 80808 (10 \boxed{1} \boxed{0} \boxed{1} \\ - 8 \\ \hline 118 \\ - 8 \\ \hline 38 \\ - 8 \\ \hline 08 \\ - 8 \\ \hline 0 \end{array}$

9. Total amount collected = ₹2560

Amount of thirteen notes of ₹20 = ₹20 \times 13 = ₹260

Remaining amount = ₹2560 – ₹260 = ₹2300

\therefore Number of ₹100 notes = $2300 \div 100 = 23$

Thus, Sudheshna have 23 notes of ₹100.

10. Boxes of apples bought by the shopkeeper = 9

Number of apples in each box = 150

Total number of apples = $150 \times 9 = 1350$

Number of fresh apples = $1350 - 30 = 1320$

$(\because 30$ apples are rotten)

Number of apples in each of 6 boxes

$$= 1320 \div 6 = 220$$

Thus, 220 apples packed in each box.

Life Skills (Page 84)

Number of fields in cooperative form = 80

Each field yields = 325 kg of rice

$$\begin{array}{r} 75) 26000 (346 \\ - 225 \\ \hline 350 \\ - 300 \\ \hline 50 \end{array}$$

$$= 325 \times 80 = 26000 \text{ kg}$$

Number of farmers = 75

Weight of rice each farmer got = $26000 \div 75$

$$\Rightarrow Q = 346 \text{ kg and } R = 50 \text{ kg}$$

Thus, each farmer got 346 kg of rice and 50 kg of rice given to old-age home.

Brain Sizzlers (Page 84)

Number of members in Mr. Verma family = 12

The ticket price for combo ride package for 3 people = ₹2175

The ticket price for 12 people = ₹(2175 \times 4)

$$(\because 12 = 3 \times 4)$$

$$= ₹8700$$

Thus, Mr. Verma had to pay ₹8700 for tickets.

CHAPTER 5 : FACTORS AND MULTIPLES

Let's Recall

$$2. 18 = 1 \times 18 = 2 \times 9 = 3 \times 6$$

$$3. 20 = 1 \times 20 = 2 \times 10 = 4 \times 5$$

$$4. 24 = 1 \times 24 = 2 \times 12 = 3 \times 8 = 4 \times 6$$

Think and Answer (Page 88)

Multiplication facts of 24

$$= 1 \times 24, 2 \times 12, 3 \times 8, 4 \times 6$$

Factors of 24 = 1, 2, 3, 4, 6, 8, 12, 24

Think and Answer (Page 90)

1. If there was just one boat, 90 people got into it.

2. If there were two boats, 45 people got into it.

3. If there were 30 people in a boat, there were 3 boats required.

4. If a small boat has a maximum capacity of 12 people, then, 8 such boats would be required keeping in mind that no one should be left behind.

Practice Time 5A

1. (a) True (b) False

(c) False (d) False

2. (a) $1 \times 12 = 12$; 1 and 12 are the factors of 12.

$2 \times 6 = 12$; 2 and 6 are the factors of 12.

$3 \times 4 = 12$; 3 and 4 are the factors of 12.

Since, there are no pairs of numbers left whose product is 12.

So, 1, 2, 3, 4, 6 and 12 are factors of 12.

(b) $1 \times 28 = 28$; 1 and 28 are the factors of 28.

$2 \times 14 = 28$; 2 and 14 are the factors of 28.

$4 \times 7 = 28$; 4 and 7 are the factors of 28.

Since, there are no pairs of numbers left whose product is 28.

So, 1, 2, 4, 7, 14 and 28 are factors of 28.

(c) $1 \times 45 = 45$; 1 and 45 are the factors of 45.

$3 \times 15 = 45$; 3 and 15 are the factors of 45.

$5 \times 9 = 45$; 5 and 9 are the factors of 45.

Since, there are no pairs of numbers left whose product is 45.

So, 1, 3, 5, 9, 15 and 45 are factors of 45.

(d) and (e) — Do it yourself (same as above)

3. (a) We divide 24 by all possible counting numbers.

$24 \div 1 = 24$; 1 and 24 are factors of 24.

$24 \div 2 = 12$; 2 and 12 are factors of 24.

$24 \div 3 = 8$; 3 and 8 are factors of 24.

$24 \div 4 = 6$; 4 and 6 are factors of 24.

$24 \div 6 = 4$; 6 and 4 are factors of 24.

$24 \div 8 = 3$; 8 and 3 are factors of 24.

$24 \div 12 = 2$; 12 and 2 are factors of 24.

$24 \div 24 = 1$; 24 and 1 are factors of 24.

Thus, 1, 2, 3, 4, 6, 8, 12 and 24 are factors of 24.

(b) $36 \div 1 = 36$

$36 \div 2 = 18$

$36 \div 3 = 12$

$36 \div 4 = 9$

$36 \div 6 = 6$

Thus, the factors of 36 are 1, 2, 3, 4, 6, 9, 12, 18 and 36.

(c) $54 \div 1 = 54$

$54 \div 2 = 27$

$54 \div 3 = 18$

$54 \div 6 = 9$

Thus, the factors of 54 are 1, 2, 3, 6, 9, 18, 27 and 54.

(d) and (e) — Do it yourself (same as above)

4. (a) Divide 140 by 12.

$$\begin{array}{r} 140 \\ \hline 12 \quad (11) \\ \hline 020 \\ \hline 12 \\ \hline 08 \end{array}$$

Since, the division of 140 by 12 leaves remainder 8, so 12 is not a factor of 140.

(b) Divide 160 by 10.

$$\begin{array}{r} 160 \\ \hline 10 \quad (16) \\ \hline 060 \\ \hline 60 \\ \hline 0 \end{array}$$

Since, the division of 160 by 10 leaves no remainder, so 10 is a factor of 160.

(c) Divide 176 by 8.

$$\begin{array}{r} 176 \\ \hline 8 \quad (22) \\ \hline 16 \\ \hline 16 \\ \hline 0 \end{array}$$

Since, the division of 176 by 8 leaves no remainder, so 8 is a factor of 176.

(d) Divide 220 by 15.

$$\begin{array}{r} 220 \\ \hline 15 \quad (14) \\ \hline 70 \\ \hline 60 \\ \hline 10 \end{array}$$

Since, the division of 220 by 15 leaves remainder 10, so 15 is not a factor of 220.

5. (a) The factors of 18 are (1), (2), (3), (6), 9 and 18.

The factors of 24 are (1), (2), (3), 4, (6), 8 12 and 24.

So, the common factors of 18 and 24 are 1, 2, 3 and 6.

(b) The factors of 10 are (1), 2, (5) and 10.

The factors of 25 are (1), (5), and 25.

So, the common factors of 10 and 25 are 1 and 5.

(c) The factors of 21 are (1), 3, (7) and 21.

The factors of 35 are (1), 5, (7) and 35.

So, the common factors of 21 and 35 are 1 and 7.

(d) The factors of 42 are (1), (2), (3), (6), 7, 14, 21 and 42.

The factors of 54 are $\textcircled{1}$, $\textcircled{2}$, $\textcircled{3}$, $\textcircled{6}$, 9, 18, 27 and 54.

So, the common factors of 42 and 54 are 1, 2, 3 and 6.

(e) The factors of 60 are $\textcircled{1}$, $\textcircled{2}$, $\textcircled{3}$, 4, $\textcircled{5}$, $\textcircled{6}$, $\textcircled{10}$, 12, $\textcircled{15}$, 20, $\textcircled{30}$ and 60.

The factors of 90 are $\textcircled{1}$, $\textcircled{2}$, $\textcircled{3}$, $\textcircled{5}$, $\textcircled{6}$, 9, $\textcircled{10}$, $\textcircled{15}$, 18, $\textcircled{30}$, 45 and 90.

So, the common factors of 60 and 90 are 1, 2, 3, 5, 6, 10, 15 and 30.

(f) The factors of 24 are $\textcircled{1}$, $\textcircled{2}$, 3, $\textcircled{4}$, 6, $\textcircled{8}$, 12 and 24.

The factors of 32 are $\textcircled{1}$, $\textcircled{2}$, $\textcircled{4}$, $\textcircled{8}$, 16 and 32.

So, the common factors of 24 and 32 are 1, 2, 4, and 8.

(g) The factors of 18 are $\textcircled{1}$, $\textcircled{2}$, 3, 6, 9 and 18.

The factors of 24 are $\textcircled{1}$, $\textcircled{2}$, 3, 4, 6, 8, 12 and 24.

The factors of 32 are $\textcircled{1}$, $\textcircled{2}$, 4, 8, 16, and 32.

So, the common factors of 18, 24 and 32 are 1 and 2.

Practice Time 5B

1. (a) $5 \times 1 = 5$, $5 \times 2 = 10$, $5 \times 3 = 15$, $5 \times 4 = 20$, $5 \times 5 = 25$ and $5 \times 6 = 30$.

Thus, the first six multiples of 5 are 5, 10, 15, 20, 25 and 30.

(b) $7 \times 1 = 7$, $7 \times 2 = 14$, $7 \times 3 = 21$, $7 \times 4 = 28$, $7 \times 5 = 35$ and $7 \times 6 = 42$.

Thus, the first six multiples of 7 are 7, 14, 21, 28, 35 and 42.

(c) $11 \times 1 = 11$, $11 \times 2 = 22$, $11 \times 3 = 33$, $11 \times 4 = 44$, $11 \times 5 = 55$ and $11 \times 6 = 66$.

Thus, the first six multiples of 11 are 11, 22, 33, 44, 55 and 66.

(d) $13 \times 1 = 13$, $13 \times 2 = 26$, $13 \times 3 = 39$, $13 \times 4 = 52$, $13 \times 5 = 65$ and $13 \times 6 = 78$.

Thus, the first six multiples of 13 are 13, 26, 39, 52, 65 and 78.

2. (a) Since, 9 is an odd number and first five even numbers are 2, 4, 6, 8 and 10.

So, the first five even multiples of 9 are $9 \times 2 = 18$, $9 \times 4 = 36$, $9 \times 6 = 54$, $9 \times 8 = 72$ and $9 \times 10 = 90$.

Thus, the first five even multiples of 9 are 18, 36, 54, 72 and 90.

(b) Since, 13 is an odd number and first five even numbers are 2, 4, 6, 8 and 10.

So, the first five even multiples of 13 are $13 \times 2 = 26$, $13 \times 4 = 52$, $13 \times 6 = 78$, $13 \times 8 = 104$ and $13 \times 10 = 130$.

Thus, the first five even multiples of 13 are 26, 52, 78, 104 and 130.

(c) Since, 15 is an odd number and first five even numbers are 2, 4, 6, 8 and 10.

So, the first five even multiples of 15 are $15 \times 2 = 30$, $15 \times 4 = 60$, $15 \times 6 = 90$, $15 \times 8 = 120$ and $15 \times 10 = 150$.

Thus, the first five even multiples of 15 are 30, 60, 90, 120 and 150.

(d) Since, 25 is an odd number and first five even numbers are 2, 4, 6, 8 and 10.

So, the first five even multiples of 25 are $25 \times 2 = 50$, $25 \times 4 = 100$, $25 \times 6 = 150$, $25 \times 8 = 200$ and $25 \times 10 = 250$.

Thus, the first five even multiples of 25 are 50, 100, 150, 200 and 250.

3. (a) The 5th multiple of 8 = $5 \times 8 = 40$

(b) The 8th multiple of 9 = $8 \times 9 = 72$

(c) Multiples of 12 less than 144 are 12, 24, 36, 48, 60, 72, 84, 96, 108, 120 and 132.

(d) Multiples of 3 between 20 and 50 are 21, 24, 27, 30, 33, 36, 39, 42, 45 and 48.

(e) Multiples of 9 between 50 and 100 are 54, 63, 72, 81, 90 and 99.

(f) The first multiple of 9 exactly divisible by 8 is 72.

4. (a) Multiples of 4 = 4, 8, 12, 16, **20**, 24, 28, 32, 36, **40**, 44, 48, 52, 56, **60**, 64, 68, 72, 76, **80**, ...

Multiples of 5 = 5, 10, 15, **20**, 25, 30, 35, **40**, 45, 50, 55, **60**, 65, 70, 75, **80**, ...

Common multiples of 4 and 5 = **(20)**, 40, 60, 80

(b) Multiples of 3 = 3, 6, 9, 12, **15**, 18, 21, 24, 27, **30**, 33, 36, 39, 42, **45**, 48, 51, 54, 57, **60**, ...

Multiples of 5 = 5, 10, **15**, 20, 25, **30**, 35, 40, **45**, 50, 55, **60**, 65, 70, 75, ...

Common multiples of 3 and 5 = **(15)**, 30, 45, and **60**

(c) Multiples of 2 = 2, 4, 6, 8, 10, 12, **14**, 16, 18, 20, 22, 24, 26, **28**, 30, 32, 34, 36, 38, 40, **42**, 44, 46, 48, 50, 52, 54, **56**, ...
 Multiples of 7 = 7, **14**, 21, **28**, 35, **42**, 49, **56**, ...
 Common multiples of 2 and 7 = **(14)**, 28, 42, and **56**

(d) Multiples of 6 = 6, 12, 18, **24**, 30, 36, 42, **48**, 54, 60, 66, **72**, 78, 84, 90, **96**, ...
 Multiples of 8 = 8, 16, **24**, 32, 40, **48**, 56, 64, **72**, 80, 88, **96** ...
 Common multiples of 6 and 8 = **(24)**, 48, 72 and 96

(e) Multiples of 10 = 10, **20**, 30, **40**, 50, **60**, 70, **80**, ...
 Multiples of 20 = **20**, **40**, **60**, **80**, 100, 120, ...
 Common multiples of 10 and 20 = **(20)**, 40, 60 and 80

Practice Time 5C

1. (a) True;
 Since, $2 + 4 + 3 = 9$ divisible by 3 and 9 both
 (b) False;
 For example, 45 is divisible by 5, but not by 10.
 (c) True;
 Since a number is divisible by 6, if it is divisible by 2 and 3 both.
 (d) True;
 Since a number is divisible by 9, then it must be divisible by 3.

2.

Numbers	Divisible by					
	2	3	4	5	9	10
(a) 62	yes	no	no	no	no	no
(b) 96	yes	yes	yes	no	no	no
(c) 284	yes	no	yes	no	no	no
(d) 251	no	no	no	no	no	no
(e) 1024	yes	no	yes	no	no	no
(f) 6318	yes	yes	no	no	yes	no

Think and Answer (Page 99)

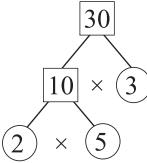
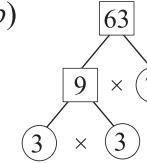
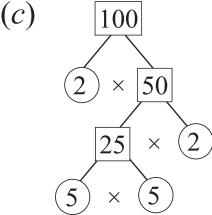
1. Prime numbers less than 25 = 2, 3, 5, 7, 11, 13, 17, 19 and 23.
 2. Composite numbers less than 30 = 4, 6, 8, 9, 10, 12, 14, 15, 16, 18, 20, 21, 22, 24, 25, 26, 27 and 28.

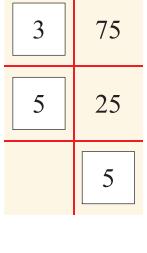
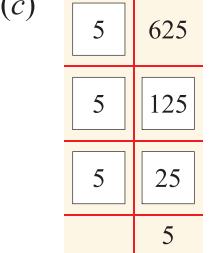
Practice Time 5D

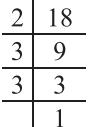
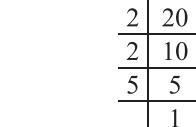
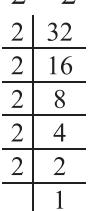
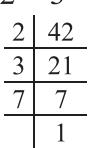
1. (a) 15; Composite number $(\because 15 = 3 \times 5)$
 (b) 21; Composite number $(\because 21 = 3 \times 7)$
 (c) 23; Prime number $(\because 23 = 1 \times 23)$
 (d) 33; Composite number $(\because 33 = 3 \times 11)$
 (e) 46; Composite number $(\because 46 = 2 \times 23)$
 (f) 49; Composite number $(\because 49 = 7 \times 7)$

2. (a) Prime numbers between 10 and 30 = 11, 13, 17, 19, 23 and 29.
 (b) Prime numbers between 50 and 60 = 53 and 59.
 (c) Prime numbers between 80 and 90 = 83 and 89.

3. (a) Composite numbers between 1 and 10 = 4, 6, 8, 9 (4 numbers).
 (b) Composite numbers between 20 and 30 = 21, 22, 24, 25, 26, 27, 28 (7 numbers).
 (c) Composite numbers between 70 and 80 = 72, 74, 75, 76, 77, 78 (6 numbers).

4. (a) 
 (b) 
 (c) 

5. (a) 
 (b) 
 (c) 

6. (a) $18 = 2 \times 3 \times 3$ 
 (b) $20 = 2 \times 2 \times 5$ 
 (c) $32 = 2 \times 2 \times 2 \times 2 \times 2$ 
 (d) $42 = 2 \times 3 \times 7$ 

Detailed Solutions

(e) $60 = 2 \times 2 \times 3 \times 5$

2	60
2	30
3	15
5	5
	1

(f) $81 = 3 \times 3 \times 3 \times 3$

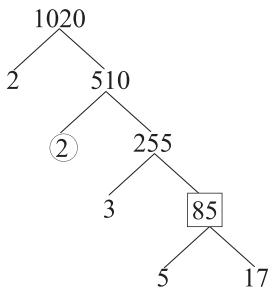
3	81
3	27
3	9
3	3
	1

Chapter Assessment

1. (a) (iii) Both Riya and Siya are correct.
 $(\because 90 = 15 \times 6)$

(b) (ii) 8, 16, 24, 32, 40, are all multiples of 8.

(c) (iii) $a = 2, b = 85$



(d) (i) 3630 is not divisible by 9.

2. (a) False;
 Since, $1 \times 5 = 5$ is a prime number.

(b) False;
 For example, 15 is an odd number, but not a prime number.

(c) False;
 Multiples of a number cannot be counted whereas factors of a number can be counted.

(d) True;
 For example, 10 or 15 both have 5 as their factor and the numbers are also multiple of 5.

(e) False;
 Every counting number (except 1) are either prime or composite.

(f) True;
 2 is the only even prime number.

3. (a) The smallest multiple of 2 greater than 28 is 30.

(b) A multiple of 2 but not of 3, lesser than 12 but greater than 8, is 10.

(c) A multiple of 5, 6 and 10, greater than 40 but less than 80, is 60.

(d) A multiple of 5 and 2 which is 2 more than the third multiple of 6, is 20.

(e) A multiple of 3 but not of 6 and 9, greater than 22 but less than 37, is 33.

4. (a) Thirteenth multiple of 2 = $2 \times 13 = 26$.

(b) The greatest 2-digit multiple of 3 = 99.

(c) Greatest factor of the greatest 5-digit number = 99999

(d) Smallest multiple of the greatest 5-digit number = 99999

5. 1, 2, 4, 5, 8, 10, 25, 40, 125

6. First 3 multiples of 9 are: 9, 18, 27 and sum = $9 + 18 + 27 = 54$. And $54 = 6 \times 9$

Thus, 6th multiple of 9 is equal to the sum of its first 3 multiples.

7. 4 pairs (13 and 31, 17 and 71, 37 and 73, 79 and 97)

8. 312, 402, 444, 612.

House number 312, 402, 444, and 612 are divisible by 6, so by 3 also.

Life Skills (Page 104)

1. Room numbers that are multiple of 3 and 5, i.e., 15 are: 15, 30, 45, 60, 75, 90, 105, 120, 135, 150, 165, 180, 195.

2. 6, 12, 18, 24, 30; Since, Vishal work daily, Simran work alternate day, i.e., every 2nd day and Shelly work on every 3rd day, so we have to find the date, which are common multiple of 1, 2 and 3, i.e., 6.

Mental Maths (Page 105)

1. (a) Every number is a multiple of 1.

2. (c) Every number other than 1 has at least 2 factors.

3. (c) Smallest 2-digit number = 10
 $10 - 2 = 8$ is a multiple of 2.

4. (a) Odd factors of 30 are 1, 3, 5 and 15 (4 factors).

CHAPTER 6 : FRACTIONS

Let's Recall

1. (a)

2. (a) $\frac{3}{9}$ (b) $\frac{4}{9}$

(c) $\frac{3}{9}$ (d) $\frac{4}{9}$

3. (a) Numerator = 2, Denominator = 5

(b) Numerator = 3, Denominator = 7

(c) Numerator = 4, Denominator = 9
 (d) Numerator = 5, Denominator = 10

4. (a) $\frac{1}{3}$ of 15 apples = $\frac{1}{3} \times 15 = 5$ apples

(b) $\frac{2}{3}$ of 21 pencils = $\frac{2}{3} \times 21 = 14$ pencils

(c) $\frac{3}{4}$ of 20 stamps = $\frac{3}{4} \times 20 = 15$ stamps

Quick Check (Page 108)

1. $\frac{2}{9}, \frac{3}{9}, \frac{8}{9}$ are like fractions $\frac{7}{8}$ is unlike fractions.

Hence, odd one out is $\frac{7}{8}$.

2. $\frac{1}{12}, \frac{11}{12}$ and $\frac{13}{12}$ are like fractions.

$\frac{5}{11}$ is unlike fraction.

Hence, $\frac{5}{11}$ is odd one out.

Practice Time 6A

1. (a), (b) and (e) are like fractions because denominators are same.

2. (a), (c) and (e) are unlike fractions because denominators are different.

3. (a) $\frac{3}{7} = \frac{6}{14}$ $\left(\because \frac{3}{7} = \frac{3 \times 2}{7 \times 2} = \frac{6}{14}\right)$

(b) $\frac{2}{5} = \frac{6}{15}$ $\left(\because \frac{2}{5} = \frac{2 \times 3}{5 \times 3} = \frac{6}{15}\right)$

(c) $\frac{16}{28} = \frac{4}{7}$ $\left(\frac{16}{28} = \frac{16 \div 4}{28 \div 4} = \frac{4}{7}\right)$

(d) $\frac{7}{35} = \frac{1}{5}$ $\left(\because \frac{7}{35} = \frac{7 \div 7}{35 \div 7} = \frac{1}{5}\right)$

4. (a) $\frac{2}{3} = \frac{6}{9}$ $\left(\because \frac{2}{3} = \frac{2 \times 3}{3 \times 3} = \frac{6}{9}\right)$

(b) $\frac{7}{9} = \frac{14}{18}$ $\left(\because \frac{7}{9} = \frac{7 \times 2}{9 \times 2} = \frac{14}{18}\right)$

(c) $\frac{15}{35} = \frac{3}{7}$ $\left(\because \frac{15}{35} = \frac{15 \div 5}{35 \div 5} = \frac{3}{7}\right)$

(d) $\frac{16}{36} = \frac{4}{9}$ $\left(\because \frac{16}{36} = \frac{16 \div 4}{36 \div 4} = \frac{4}{9}\right)$

5. (a) $\frac{2}{5} = \frac{8}{20}$ $\left(\because \frac{2}{5} = \frac{2 \times 4}{5 \times 4} = \frac{8}{20}\right)$

(b) $\frac{3}{9} = \frac{18}{54}$ $\left(\because \frac{3}{9} = \frac{3 \times 6}{9 \times 6} = \frac{18}{54}\right)$

(c) $\frac{5}{9} = \frac{45}{81}$ $\left(\because \frac{5}{9} = \frac{5 \times 9}{9 \times 9} = \frac{45}{81}\right)$

(d) $\frac{4}{7} = \frac{24}{42}$ $\left(\because \frac{4}{7} = \frac{4 \times 6}{7 \times 6} = \frac{24}{42}\right)$

6. (a) $\frac{5}{7} = \frac{5 \times 2}{7 \times 2} = \frac{10}{14}$; $\frac{5}{7} = \frac{5 \times 3}{7 \times 3} = \frac{15}{21}$;

$\frac{5}{7} = \frac{5 \times 4}{7 \times 4} = \frac{20}{28}$; $\frac{5}{7} = \frac{5 \times 5}{7 \times 5} = \frac{25}{35}$ and

$\frac{5}{7} = \frac{5 \times 6}{7 \times 6} = \frac{30}{42}$.

So, the five equivalent fractions of

$\frac{5}{7}$ are $\frac{10}{14}, \frac{15}{21}, \frac{20}{28}, \frac{25}{35}$ and $\frac{30}{42}$.

(b) $\frac{3}{4} = \frac{3 \times 2}{4 \times 2} = \frac{6}{8}$; $\frac{3}{4} = \frac{3 \times 3}{4 \times 3} = \frac{9}{12}$;

$\frac{3}{4} = \frac{3 \times 4}{4 \times 4} = \frac{12}{16}$; $\frac{3}{4} = \frac{3 \times 5}{4 \times 5} = \frac{15}{20}$ and

$\frac{3}{4} = \frac{3 \times 6}{4 \times 6} = \frac{18}{24}$.

So, the five equivalent fractions of

$\frac{3}{4}$ are $\frac{6}{8}, \frac{9}{12}, \frac{12}{16}, \frac{15}{20}$ and $\frac{18}{24}$.

(c) $\frac{5}{8} = \frac{5 \times 2}{8 \times 2} = \frac{10}{16}$; $\frac{5}{8} = \frac{5 \times 3}{8 \times 3} = \frac{15}{24}$;

$\frac{5}{8} = \frac{5 \times 4}{8 \times 4} = \frac{20}{32}$; $\frac{5}{8} = \frac{5 \times 5}{8 \times 5} = \frac{25}{40}$ and

$\frac{5}{8} = \frac{5 \times 6}{8 \times 6} = \frac{30}{48}$.

So, the five equivalent fractions of

$\frac{5}{8}$ are $\frac{10}{16}, \frac{15}{24}, \frac{20}{32}, \frac{25}{40}$ and $\frac{30}{48}$.

(d) and (e) same as above parts.

7. (a) $\frac{5}{11} \cancel{\times} \frac{10}{22}$

Here, $5 \times 22 = 110$ and $11 \times 10 = 110$.
 i.e., both the products are equal.

Hence, $\frac{5}{11}$ and $\frac{10}{22}$ are equivalent fractions.

Detailed Solutions

$$(b) \frac{8}{12} \cancel{\times} \frac{16}{21}$$

Here, $8 \times 21 = 168$ and $12 \times 16 = 192$.
i.e., both the products are different.

Hence, $\frac{8}{12}$ and $\frac{16}{21}$ are not equivalent fractions.

$$(c) \frac{3}{8} \cancel{\times} \frac{18}{48}$$

Here, $3 \times 48 = 144$ and $8 \times 18 = 144$.
i.e., both the products are equal.

Hence, $\frac{3}{8}$ and $\frac{18}{48}$ are not equivalent fractions.

$$(d) \frac{9}{10} \cancel{\times} \frac{27}{40}$$

Here, $9 \times 40 = 360$ and $27 \times 10 = 270$.
i.e., both the products are different.

Hence, $\frac{9}{10}$ and $\frac{27}{40}$ are not equivalent fractions.

$$(e) \frac{4}{5} \cancel{\times} \frac{36}{45}$$

Here, $4 \times 45 = 180$ and $5 \times 36 = 180$.
i.e., both the products are equal.

Hence, $\frac{4}{5}$ and $\frac{36}{45}$ are equivalent fractions.

Practice Time 6B

1. (a) $\frac{3}{15}$ Factors of numerator 3 are = 1 and 3.

Factors of denominator 15 are 1, 3, 5 and 15.
Here, common factors of 3 and 15 are 1 and 3.

Thus, $\frac{3}{15}$ is not in its simplest form.

(b) $\frac{9}{13}$

Factors of numerator 9 are 1, 3 and 9.

Factors of denominator 13 are 1 and 13.

Here, common factors of 9 and 13 is 1.

Thus, $\frac{9}{13}$ is in its simplest form.

(c) $\frac{12}{18}$

Factors of numerator 12 = 1, 2, 3, 4, 6 and 12.

Factors of denominator 18 = 1, 2, 3, 6, 9, 18.

Here, common factors of 12 and 18 are 1, 2, 3 and 6.

Thus, $\frac{12}{18}$ is not in its simplest form.

(d) $\frac{17}{21}$

Factors of numerator 17 = 1 and 17.

Factors of denominator 21 = 1, 3, 7, 21.

Here, common factors of 17 and 21 is 1.

Thus, $\frac{17}{21}$ is in its simplest form.

(e) $\frac{12}{19}$

Factors of numerator 12 = 1, 2, 3, 4, 6 and 12.

Factors of denominator 19 = 1 and 19.

Here, common factors of 12 and 19 is 1.

Thus, $\frac{12}{19}$ is in its simplest form.

(f) $\frac{15}{24}$

Factors of numerator 15 = 1, 3, 5 and 15.

Factors of denominator 24 = 1, 2, 3, 4, 6, 8, 12 and 24.

Here, common factors of 15 and 24 are 1 and 3.

Thus, $\frac{15}{24}$ is not in its simplest form.

(g) to (j) — Same as above.

2. (a) $\frac{14 \div 7}{21 \div 7} = \frac{2}{3}$ (b) $\frac{10 \div 2}{18 \div 2} = \frac{5}{9}$

(c) $\frac{15 \div 5}{35 \div 5} = \frac{3}{7}$

3. (a) $\frac{19}{38} = \frac{19 \div 19}{38 \div 19} = \frac{1}{2}$

Thus, $\frac{1}{2}$ is the simplest form of $\frac{19}{38}$.

(b) $\frac{10}{20} = \frac{2 \times 5}{2 \times 2 \times 5} = \frac{1}{2}$

Thus, $\frac{1}{2}$ is the simplest form of $\frac{10}{20}$.

(c) $\frac{16}{80} = \frac{4 \times 4}{4 \times 4 \times 5} = \frac{1}{5}$

Thus, $\frac{1}{5}$ is the simplest form of $\frac{16}{80}$.

$$(d) \frac{30}{90} = \frac{3 \times 10}{3 \times 3 \times 10} = \frac{1}{3}$$

Thus, $\frac{1}{3}$ is the simplest form of $\frac{30}{90}$.

$$(e) \frac{64}{96} = \frac{4 \times 4 \times 2 \times 2}{4 \times 4 \times 2 \times 3} = \frac{2}{3}$$

Thus, $\frac{2}{3}$ is the simplest form of $\frac{64}{96}$.

$$(f) \frac{9}{12} = \frac{3 \times 3}{3 \times 4} = \frac{3}{4}$$

(g) to (j)—Same as above.

Practice Time 6C

1. Proper fractions = (a), (b), (d) and (e).

2. Improper fractions = (b) and (e)

3. Unit fraction = (b), (d) and (f)

4. (a) Divide numerator 9 by the denominator 5.

$$\frac{9}{5} = 9 \div 5$$

$$\text{Thus, } \frac{9}{5} = 1 \frac{4}{5}.$$

$$\begin{array}{r} 5 \overline{) 9} (1 \leftarrow \text{Whole} \\ \text{Denominator} \overline{- 5} \leftarrow \text{part} \\ \hline 4 \leftarrow \text{Numerator} \\ \text{(new)} \end{array}$$

(b) Divide numerator 12 by the denominator 7.

$$\frac{12}{7} = 12 \div 7$$

$$\text{Thus, } \frac{12}{7} = 1 \frac{5}{7}.$$

$$\begin{array}{r} 7 \overline{) 12} (1 \leftarrow \text{Whole} \\ \text{Denominator} \overline{- 7} \leftarrow \text{part} \\ \hline 5 \leftarrow \text{Numerator} \\ \text{(new)} \end{array}$$

(c) Divide numerator 19 by the denominator 15.

$$\frac{19}{15} = 19 \div 15$$

$$\text{Thus, } \frac{19}{15} = 1 \frac{4}{15}.$$

$$\begin{array}{r} 15 \overline{) 19} (1 \leftarrow \text{Whole} \\ \text{Denominator} \overline{- 15} \leftarrow \text{part} \\ \hline 04 \leftarrow \text{Numerator} \\ \text{(new)} \end{array}$$

(d) Divide numerator 30 by the denominator 12.

$$\frac{30}{12} = 30 \div 12$$

$$\text{Thus, } \frac{30}{12} = 2 \frac{6}{12} \text{ or } 2 \frac{1}{2}$$

$$\begin{array}{r} 12 \overline{) 30} (2 \leftarrow \text{Whole} \\ \text{Denominator} \overline{- 24} \leftarrow \text{part} \\ \hline 06 \leftarrow \text{Numerator} \\ \text{(new)} \end{array}$$

(e) Divide numerator 20 by the denominator 13.

$$\frac{20}{13} = 20 \div 13$$

$$\text{Thus, } \frac{20}{13} = 1 \frac{7}{13}$$

$$\begin{array}{r} 13 \overline{) 20} (1 \leftarrow \text{Whole} \\ \text{Denominator} \overline{- 13} \leftarrow \text{part} \\ \hline 07 \leftarrow \text{Numerator} \\ \text{(new)} \end{array}$$

(f) Divide numerator 24 by the denominator 5.

$$\frac{24}{5} = 24 \div 5$$

$$\begin{array}{r} 5 \overline{) 24} (4 \leftarrow \text{Whole} \\ \text{Denominator} \overline{- 20} \leftarrow \text{part} \\ \hline 04 \leftarrow \text{Numerator} \\ \text{(new)} \end{array}$$

$$\text{Thus, } \frac{24}{5} = 4 \frac{4}{5}.$$

$$5. (a) 8 \frac{1}{2} = \frac{8 \times 2 + 1}{2} = \frac{16 + 1}{2} = \frac{17}{2}$$

$$(b) 7 \frac{1}{3} = \frac{7 \times 3 + 1}{3} = \frac{21 + 1}{3} = \frac{22}{3}$$

$$(c) 10 \frac{2}{3} = \frac{10 \times 3 + 2}{3} = \frac{30 + 2}{3} = \frac{32}{3}$$

$$(d) 4 \frac{1}{4} = \frac{4 \times 4 + 1}{4} = \frac{16 + 1}{7} = \frac{17}{4}$$

$$(e) 5 \frac{1}{5} = \frac{5 \times 5 + 1}{5} = \frac{25 + 1}{5} = \frac{26}{5}$$

$$(f) 9 \frac{1}{7} = \frac{9 \times 7 + 1}{7} = \frac{63 + 1}{7} = \frac{64}{7}$$

$$6. (a) 3 \frac{3}{5} = \frac{3 \times 5 + 3}{5} = \frac{15 + 3}{5} = \frac{18}{5}$$

$$(b) 4 \frac{4}{7} = \frac{4 \times 7 + 4}{7} = \frac{32}{7}$$

$$(c) 8 \frac{2}{3} = \frac{26}{3}$$

$$(d) 4 \frac{5}{6} = \frac{4 \times 6 + 5}{6} = \frac{24 + 5}{6} = \frac{29}{6}$$

Practice Time 6D

1. (a) Here, the denominators of the given fractions are same. So, comparing numerators 3 and 1, we have $3 > 1$.

$$\text{Thus, } \frac{3}{4} > \frac{1}{4}.$$

(b) Here, the denominators of the given fractions are same. So, comparing numerators 4 and 8, we have $4 < 8$.

$$\text{Thus, } \frac{4}{9} < \frac{8}{9}.$$

(c) Here, the denominators of the given fractions are same. So, comparing numerators 10 and 8, we have $10 > 8$.

$$\text{Thus, } \frac{10}{15} > \frac{8}{15}.$$

(d) Here, the numerators are same and we know that in unlike fractions with same numerators,

Detailed Solutions

the fraction with greater denominator will be smaller.

Thus, $\frac{3}{15} < \frac{3}{8}$.

(e) Comparing the numerators 3 and 5, we have $5 > 3$.

So, $\frac{3}{8} < \frac{5}{8}$.

(f) and (h) same as part (e).

(g), (i) and (j) same as part (d).

2. (a) Here, the denominators of the given fractions are same. So, comparing numerators 4 and 1, we have $4 > 1$. Thus, $\frac{4}{5}$ is greater.

(b) Here, the denominators of the given fractions are same. So, comparing numerators 9 and 7, we have $9 > 7$. Thus, $\frac{9}{13}$ is greater.

(c) $\frac{3}{9} = \frac{3}{3 \times 3} = \frac{1}{3}$ and $\frac{8}{12} = \frac{8}{2 \times 6} = \frac{4}{6} = \frac{2}{3}$

Clearly, $\frac{1}{3} < \frac{2}{3}$. So, $\frac{8}{12}$ is greater.

(d) Here, the denominators of the given fractions are same. So, comparing numerators 3 and 2, we have $3 > 2$. Thus, $\frac{3}{4}$ is greater.

(e) Here the numerators are same.

So, comparing denominators 11 and 13, we have $11 < 13$. Thus, $\frac{8}{11}$ is greater.

3. (a) Since, the denominators are same. Therefore, comparing numerators: $2 < 4 < 5 < 7$
So, the fractions in ascending order are:

$$\frac{2}{8} < \frac{4}{8} < \frac{5}{8} < \frac{7}{8}$$

(b) Since, $1 < 2 < 5 < 6$

So, the fractions in ascending order are:

$$\frac{1}{9} < \frac{2}{9} < \frac{5}{9} < \frac{6}{9}$$

(c) Since, the numerators of the given fractions are same, so, the fraction with smaller denominator will be the greater fraction. $7 < 8 < 12 < 13$.

Thus, the fractions in ascending order are:

$$\frac{6}{13} < \frac{6}{12} < \frac{6}{8} < \frac{6}{7}$$

(d) Since, the numerators of the given fractions is same, so, the fraction with smaller denominator will be the bigger fraction. $2 < 3 < 7 < 9$.

Thus, the fractions in ascending order are

$$\frac{1}{9} < \frac{1}{7} < \frac{1}{3} < \frac{1}{2}$$

4. (a) Since, the numerators of the given fractions is same, so, the fraction with greater denominator will be the smaller fraction.

Comparing denominators of the given fractions, $13 > 12 > 9 > 8$.

Thus, the fractions in descending order are:

$$\frac{7}{8} > \frac{7}{9} > \frac{7}{12} > \frac{7}{13}$$

(b) Since, the denominators of the given fractions are same.

So, comparing numerators: $4 > 3 > 2 > 1$

Thus, the fractions in descending order are:

$$\frac{4}{9} > \frac{3}{9} > \frac{2}{9} > \frac{1}{9}$$

(c) Same as part (b).

(d) Same as part (a).

Practice Time 6E

1. (a) $\frac{9}{4} + \frac{8}{4} = \frac{9+8}{4} = \frac{17}{4} = 4\frac{1}{4}$

(b) $\frac{5}{9} + \frac{8}{9} = \frac{5+8}{9} = \frac{13}{9} = 1\frac{4}{9}$

(c) $\frac{5}{12} + \frac{7}{12} = \frac{5+7}{12} = \frac{12}{12} = 1$

(d) $\frac{4}{7} + \frac{5}{7} + \frac{2}{7} = \frac{4+5+2}{7} = \frac{11}{7} = 1\frac{4}{7}$

(e) $\frac{8}{11} + \frac{24}{11} + \frac{15}{11} = \frac{8+24+15}{11} = \frac{47}{11} = 4\frac{3}{11}$

(f) $1\frac{1}{6} + \frac{1}{6} = \frac{7}{6} + \frac{1}{6} = \frac{7+1}{6} = \frac{8}{6} = \frac{4}{3} = 1\frac{1}{3}$

$$(g) 2\frac{4}{5} + \frac{2}{5} = \frac{2 \times 5 + 4}{5} + \frac{2}{5} = \frac{14}{5} + \frac{2}{5} = \frac{16}{5} = 3\frac{1}{5}$$

$$(h) 2\frac{1}{9} + 1\frac{1}{9} = \frac{2 \times 9 + 1}{9} + \frac{1 \times 9 + 1}{9} = \frac{19}{9} + \frac{10}{9} = \frac{19 + 10}{9} = \frac{29}{9} = 3\frac{2}{9}$$

$$2. (a) \frac{10}{11} - \frac{7}{11} = \frac{10-7}{11} = \frac{3}{11}$$

$$(b) \frac{9}{13} - \frac{9}{13} = \frac{9-9}{13} = \frac{0}{13} = 0$$

$$(c) \frac{5}{16} - \frac{3}{16} = \frac{5-3}{16} = \frac{2}{16} = \frac{1}{8}$$

$$(d) \frac{9}{17} - \frac{7}{17} = \frac{9-7}{17} = \frac{2}{17}$$

$$(e) 6\frac{3}{4} - 2\frac{1}{4} = \frac{27}{4} - \frac{9}{4} = \frac{27-9}{4} = \frac{18}{4} = \frac{9}{2} = 4\frac{1}{2}$$

$$(f) 4\frac{1}{12} - 3\frac{1}{12} = \frac{49}{12} - \frac{37}{12} = \frac{49-37}{12} = \frac{12}{12} = 1$$

$$(g) 5\frac{7}{16} - 4\frac{1}{16} = \frac{87}{16} - \frac{65}{16} = \frac{87-65}{16} = \frac{22}{16} = \frac{11}{8} = 1\frac{3}{8}$$

$$(h) 13\frac{3}{17} - 11\frac{2}{17} = \frac{224}{17} - \frac{189}{17} = \frac{224-189}{17} = \frac{35}{17} = \frac{35}{17} = 2\frac{1}{17}$$

$$3. (a) \text{Distance covered by Ram by bus} = \frac{5}{6} \text{ km.}$$

$$\text{Distance covered by him on foot} = \frac{1}{6} \text{ km.}$$

Total distance covered by Ram to reach the

$$\text{school} = \frac{5}{6} + \frac{1}{6} = \frac{5+1}{6} = \frac{6}{6} = 1 \text{ km.}$$

Thus, Ram covered a distance of 1 km to reach the school.

$$(b) \text{Cost of a pencil} = ₹ 4\frac{1}{2}.$$

$$\text{Cost of crayons packet} = ₹ 32\frac{1}{2}.$$

$$\text{Total cost of both the items} = ₹ 4\frac{1}{2} + ₹ 32\frac{1}{2}$$

$$= \frac{9}{2} + \frac{65}{2} = \frac{9+65}{2} = \frac{74}{2} = ₹ 37$$

Thus, the total cost of both the items is ₹ 37.

(c) Time spent in reading a book by Siya = $\frac{3}{5}$ hour.

Time spent for playing by her = $\frac{2}{5}$ hour.

Since, the denominators are same of both fractions.

Then, clearly $3 > 2$. So $\frac{3}{5} > \frac{2}{5}$.

Difference of time spent on reading and playing
 $= \frac{3}{5} - \frac{2}{5} = \frac{3-2}{5} = \frac{1}{5}$ hour.

Thus, Siya spent more time on reading by $\frac{1}{5}$ hour.

(d) Distance covered by Vivan = $2\frac{5}{8} = \frac{21}{8}$ km

Distance covered by Ridhima = $3\frac{2}{8} = \frac{26}{8}$ km

Since the denominators are same, so $\frac{26}{8} > \frac{21}{8}$.

Ridhima walked longer than Vivan.

Difference in distance walked by Ridhima and Vivan

$$= \frac{26}{8} - \frac{21}{8} = \frac{26-21}{8} = \frac{5}{8} \text{ km.}$$

Thus, Ridhima walked longer by $\frac{5}{8}$ km.

Mental Maths (Page 122)

1. (c) Total number of caps in a bag = 72.

Number of white caps = 18.

Number of red caps = $72 - 18 = 54$ caps.

Fraction of red caps in the bag = $\frac{54}{72}$.

$$= \frac{54 \div 18}{72 \div 18} = \frac{3}{4}.$$

2. (b) $\frac{9}{8}$ is an improper fraction.

3. (d) $\frac{1}{4}$ is not equivalent to $\frac{4}{24}$.

4. (a) $\frac{1}{3}$ is the simplest form of $\frac{6}{18}$.

Chapter Assessment

1. (a) – (iv) $\frac{9}{12}$ is equivalent to $\frac{3}{4}$.

(b) – (iii) Since, the numerator is same, so the fraction with the greater denominator will be smaller fraction.

Therefore, $\frac{1}{5}$ is the smallest fraction.

$$(c) - (i) \frac{2}{7} \text{ of } 154 = \frac{2}{7} \times 154 = 2 \times 22 = 44$$

$$(d) - (iii) 5\frac{3}{7} = \frac{38}{7} = 5.42$$

Thus, its value lies between 5 and 6

(e) – (iii) The numerator is same as denominator.

(f) – (ii) Time spent by the students to attend the

$$\text{class} = 5\frac{2}{5} \text{ hours.}$$

Time spent by the students in playing
 $= 1\frac{1}{5}$ hours.

Total time spent by the students

$$= 5\frac{2}{5} + 1\frac{1}{5}$$

$$= \frac{27}{5} + \frac{6}{5} = \frac{33}{5} \text{ hours} = 6\frac{3}{5} \text{ hours.}$$

$$2.(a) - (v) \left(\because \frac{8}{16} = \frac{1}{2} \right) \quad (b) - (iv) \left(\because \frac{25}{45} = \frac{5}{9} \right)$$

$$(c) - (i) \left(\because \frac{18}{20} = \frac{9}{10} \right) \quad (d) - (ii) \left(\because \frac{160}{170} = \frac{16}{17} \right)$$

$$(e) - (iii) \left(\because \frac{2}{50} = \frac{1}{25} \right)$$

$$3. (a) \frac{5}{2} \boxed{>} \frac{3}{2} \quad (b) \frac{4}{3} \boxed{=} \frac{4}{3}$$

$$(c) \frac{15}{3} \boxed{>} \frac{11}{3} \quad (d) \frac{7}{5} \boxed{<} \frac{23}{5}$$

$$4. (a) \frac{5}{8} + \frac{1}{8} = \frac{5+1}{8} = \frac{6}{8} = \frac{3}{4}.$$

$$(b) \frac{9}{11} - \frac{5}{11} = \frac{9-5}{11} = \frac{4}{11}$$

$$(c) 1\frac{5}{6} - \frac{4}{6} = \frac{11}{6} - \frac{4}{6} = \frac{11-4}{6} = \frac{7}{6} = 1\frac{1}{6}$$

$$(d) 2\frac{1}{3} + \frac{2}{3} = \frac{7}{3} + \frac{2}{3} = \frac{7+2}{3} = \frac{9}{3} = 3$$

$$5. \text{Quantity of milk drank by Maya} = \frac{3}{2} \text{ glasses.}$$

$$\text{Quantity of milk drank by Sonia} = 1\frac{1}{2} = \frac{3}{2} \text{ glasses.}$$

Thus, both of them drank same amount of milk.

6. Part of his salary spent by Mrs. Gupta for day to day expenses $= \frac{2}{5}$.

Part of his salary spent for shopping and entertainment $= \frac{1}{5}$.

Total part of salary spent in that particular month

$$= \frac{2}{5} + \frac{1}{5} = \frac{3}{5}$$

Thus, $\frac{3}{5}$ part of a salary spent in that particular month.

7. Part of a chocolate bar Seema had $= \frac{1}{4}$

Part of a chocolate bar gave her friend $= \frac{1}{4}$

Total part of a chocolate bar

$$= \frac{1}{4} + \frac{1}{4} = \frac{1+1}{4} = \frac{2}{4} = \frac{1}{2}$$

Thus, Seema have $\frac{1}{2}$ of chocolate bar now.

8. Part of cake eaten by mother $= \frac{2}{8}$.

Part of cake eaten by father $= \frac{4}{8}$.

Total part eaten by both of them

$$= \frac{2}{8} + \frac{4}{8} = \frac{2+4}{8} = \frac{6}{8} \text{ or } \frac{3}{4}$$

Thus, $\frac{3}{4}$ part of cake has been eaten.

9. A painter painted $\frac{1}{5}$ part of a wall on 1st day.

and $\frac{3}{5}$ parts on 2nd day.

Fraction of the wall painted in two days

$$= \frac{1}{5} + \frac{3}{5} = \frac{1+3}{5} = \frac{4}{5}$$

Thus, $\frac{4}{5}$ parts of a wall is painted in two days.

10. Distance covered by Anuj after dinner $= 1\frac{1}{2}$ km

$$= \frac{3}{2} \text{ km.}$$

Distance covered by Shalija

$$= 2 \frac{4}{8} = \frac{20}{8} = \frac{20 \div 4}{8 \div 4} = \frac{5}{2} \text{ km.}$$

$$\text{Difference in distance covered} = \frac{5}{2} - \frac{3}{2} = \frac{2}{2} = 1 \text{ km.}$$

Thus, Shalija walked 1 km more than Anuj. It is advised to walk after dinner because it is good for health.

Brain Sizzlers (Page 122)

$\frac{8}{2}$	$\frac{1}{2}$	$\frac{6}{2}$
$1\frac{1}{2}$	$2\frac{1}{2}$	$3\frac{1}{2}$
$\frac{4}{2}$	$4\frac{1}{2}$	$\frac{2}{2}$

$$\therefore \text{Row 1} = \frac{8}{2} + \frac{1}{2} + \frac{6}{2} = \frac{8+1+6}{2} = \frac{15}{2}$$

$$\begin{aligned} \text{Row 2} &= 1\frac{1}{2} + 2\frac{1}{2} + 3\frac{1}{2} = \frac{3}{2} + \frac{5}{2} + \frac{7}{2} \\ &= \frac{3+5+7}{2} + \frac{5}{2} + \frac{7}{2} = \frac{15}{2} \end{aligned}$$

$$\text{Row 3} = \frac{4}{2} + 4\frac{1}{2} + \frac{2}{2} = \frac{4}{2} + \frac{9}{2} + \frac{2}{2} = \frac{4+9+2}{2} = \frac{15}{2}$$

$$\begin{aligned} \text{Column 1} &= \frac{8}{2} + 1\frac{1}{2} + \frac{4}{2} = \frac{8}{2} + \frac{3}{2} + \frac{4}{2} \\ &= \frac{8+3+4}{2} = \frac{15}{2} \end{aligned}$$

$$\begin{aligned} \text{Column 2} &= \frac{1}{2} + 2\frac{1}{2} + 4\frac{1}{2} = \frac{1}{2} + \frac{5}{2} + \frac{9}{2} \\ &= \frac{1+5+9}{2} = \frac{15}{2} \end{aligned}$$

$$\begin{aligned} \text{Column 3} &= \frac{6}{2} + 3\frac{1}{2} + \frac{2}{2} = \frac{6}{2} + \frac{7}{2} + \frac{2}{2} \\ &= \frac{6+7+2}{2} = \frac{15}{2} \end{aligned}$$

$$\begin{aligned} \text{Diagonal 1} &= \frac{8}{2} + 2\frac{1}{2} + \frac{2}{2} = \frac{8}{2} + \frac{5}{2} + \frac{2}{2} \\ &= \frac{8+5+2}{2} = \frac{15}{2} \end{aligned}$$

$$\begin{aligned} \text{Diagonal 2} &= \frac{4}{2} + 2\frac{1}{2} + \frac{6}{2} = \frac{4}{2} + \frac{5}{2} + \frac{6}{2} \\ &= \frac{4+5+6}{2} = \frac{15}{2} \end{aligned}$$

Thus, the sum of each row, column and each diagonal remains the same.

CHAPTER 7 : INTRODUCTION TO DECIMALS

Practice Time 7A

1. (a) Fraction form = $\frac{5}{10}$
Decimal form = 0.5

(b) Fraction form = $\frac{16}{100}$
Decimal form = 0.16

(c) Fraction form = $1\frac{2}{10}$
Decimal form = 1.2

(d) Fraction form = $1\frac{5}{100}$
Decimal form = 1.05

(e) Fraction form = $2\frac{8}{100}$
Decimal form = 2.08

3.	Fractions	Decimals		Fractions	Decimals
(a)	$\frac{1}{10}$	0.1	(f)	$\frac{18}{100}$	0.18
(b)	$\frac{2}{10}$	0.2	(g)	$\frac{25}{100}$	0.25
(c)	$1\frac{3}{10}$	1.3	(h)	$1\frac{51}{100}$	1.51
(d)	$\frac{24}{10}$	2.4	(i)	$\frac{243}{100}$	2.43
(e)	$3\frac{5}{10}$	3.5	(j)	$5\frac{3}{100}$	5.03

Practice Time 7B

1.	Hundreds (100)	Tens (10)	Ones (1)	•	Tenths $\frac{1}{10}$	Hundredths $\frac{1}{100}$
(a)			0	•	1	3
(b)			0	•	0	9
(c)			2	•	3	7
(d)		1	2	•	4	8
(e)	1	0	1	•	7	2

2. (a) 0.09 = Zero point zero nine.
(b) 7.08 = Seven point zero eight.
(c) 13.37 = Thirteen point three seven.
(d) 128.72 = One hundred twenty-eight point seven two.

Detailed Solutions

3. (a) 7 tenths $= \frac{7}{10} = 0.7$

(b) 35 hundredths $= \frac{35}{100} = 0.35$

(c) 5 and 4 tenths $= 5\frac{4}{10} = \frac{54}{10} = 5.4$

(d) 2 and 3 hundredths $= 2\frac{3}{100} = \frac{203}{100} = 2.03$

(e) 32 and 8 hundredths $= 32\frac{8}{100} = \frac{3208}{100} = 32.08$

(f) 3 and 11 hundredths $= 3\frac{11}{100} = \frac{311}{100} = 3.11$

4. (a)

Ones	•	Tenths
1	•	7

Place Value
7 tenths $= 7 \times 0.1 = 0.7$
1 one $= 1 \times 1 = 1$

Expanded form $= 1 + 0.7$

(b)

Ones	•	Tenths	Hundredths
2	•	4	3

Place Value
3 hundredths $= 3 \times 0.01 = 0.03$
4 tenths $= 4 \times 0.1 = 0.4$
2 ones $= 2 \times 1 = 2$

Expanded form $= 2 + 0.4 + 0.03$

(c)

Tens	Ones	•	Tenths	Hundredths
1	7	•	0	3

Place Value
3 hundredths $= 3 \times 0.01 = 0.03$
0 tenths $= 0$
7 ones $= 7 \times 1 = 7$
1 ten $= 1 \times 10 = 10$

Expanded form $= 10 + 7 + 0 + 0.03$

(d)

Hundreds	Tens	Ones	•	Tenths	Hundredths
3	8	3	•	4	3

Place Value
3 hundredths $= 3 \times 0.01 = 0.03$
4 tenths $= 4 \times 0.1 = 0.4$
3 ones $= 3 \times 1 = 3$
8 tens $= 8 \times 10 = 80$
3 hundreds $= 3 \times 100 = 300$

Expanded form $= 300 + 80 + 3 + 0.4 + 0.03$

(e)

Hundreds	Tens	Ones	•	Tenths	Hundredths
5	4	7	•	7	7

Place Value
7 hundredths $= 7 \times 0.01 = 0.07$
7 tenths $= 7 \times 0.1 = 0.7$
7 ones $= 7 \times 1 = 7$
4 tens $= 4 \times 10 = 40$
5 hundreds $= 5 \times 100 = 500$

Expanded form $= 500 + 40 + 7 + 0.7 + 0.07$

5. (a) $4 \times 1 + 2 \times 0.1 = 4 + 0.2 = 4.2$

(b) 3 ones + 5 hundredths

$$= 3 + \frac{5}{100} = 3 + 0.05 = 3.05$$

(c) 4 tens + 6 ones + 5 tenths + 2 hundredths

$$= 4 \times 10 + 6 \times 1 + \frac{5}{10} + \frac{2}{100}$$

$$= 40 + 6 + 0.5 + 0.02 = 46.52$$

(d) $200 + 0.4 = 200.4$

Practice Time 7C

1. (a) $\frac{4}{10} = 0.4$

(b) $\frac{37}{10} = 3.7$

(c) $\frac{9}{100} = 0.09$

(d) $\frac{48}{100} = 0.48$

(e) $\frac{98}{100} = 0.98$

(f) $\frac{196}{100} = 1.96$

(g) $\frac{213}{100} = 2.13$

(h) $1\frac{4}{10} = \frac{14}{10} = 1.4$

(i) $23\frac{5}{10} = \frac{235}{10} = 23.5$

(j) $8\frac{7}{10} = \frac{807}{100} = 8.07$

2. (a) $0.6 = \frac{6}{10}$

(b) $0.35 = \frac{35}{100}$

(c) $1.2 = \frac{12}{10} = 1\frac{2}{10}$

(d) $5.1 = \frac{51}{10} = 5\frac{1}{10}$

(e) $3.9 = \frac{39}{10} = 3\frac{9}{10}$

(f) $3.45 = \frac{345}{100} = 3\frac{45}{100}$

(g) $9.03 = \frac{903}{100} = 9\frac{3}{100}$

(h) $27.2 = \frac{272}{10} = 27\frac{2}{10}$

(i) $26.63 = \frac{2663}{100} = 26\frac{63}{100}$

(j) $28.04 = \frac{2804}{100} = 28\frac{4}{100}$

Chapter Assessment

1. (a) (iii) Two hundredths + six tenths

$$= \frac{2}{100} + \frac{6}{10} = 0.02 + 0.6 = 0.62$$

(b) (iv) Place value of 7 in 18.27 = 7 hundredths

$$= \frac{7}{100}$$

(c) (ii) $\frac{18764}{100} = 187.64$

(d) (ii) 10 rupees and 5 paise = 10.05.

$$(e) (ii) 6\frac{9}{10} = \frac{69}{10} = 6.9$$

2. (a) (iv) Five tenths + six-hundredths

$$\frac{5}{10} + \frac{6}{100} = 0.5 + 0.06 = 0.56$$

(b) (iii) One hundred + six-tenths

$$= 100 + \frac{6}{10} = 100 + 0.6 = 100.6$$

(c) (ii) Nineteen point seven eight = 19.78

(d) (i) Thirteen + four hundredths

$$= 13 + \frac{4}{100} = 13 + 0.04 = 13.04$$

3. (a) 4.73 = Three hundredths = $\frac{3}{100} = 0.03$

$$(b) 19.\underline{6}9 = 6 \text{ tenths} = \frac{6}{10} = 0.6$$

$$(c) 72.\underline{3}7 = 3 \text{ tenths} = \frac{3}{10} = 0.3$$

$$(d) \underline{9}32.5 = 9 \text{ hundreds} = 9 \times 100 = 900$$

4. (a) Tens place = 6, ones place = 5, tenths place = 2, hundredths place = 8. Decimal number = 65.28

(b) Tenths place = 7, tens place = 8, hundredths place = 9, ones place = 4. Decimal number = 84.79.

(c) Ones place = 9, hundreds place = 3, hundredths place = 5.

Decimal number = 309.05

5. A's score = 9.8 seconds;

$$\text{B's score} = 9\frac{76}{100} = \frac{976}{100} = 9.76 \text{ seconds};$$

$$\text{C's score} = 9\frac{8}{10} = \frac{98}{10} = 9.8 \text{ seconds};$$

$$\text{D's score} = 9\frac{7}{10} \text{ seconds} = \frac{97}{10} = 9.7 \text{ seconds};$$

$$\text{E's score} = 9\frac{6}{100} = \frac{906}{100} = 9.06 \text{ seconds.}$$

Thus, swimmer (E) is the winner of the competition.

$$6. 5 \text{ tenths} = \frac{5}{10} = 0.5$$

$$\text{Decimal} = 0.5 \text{ and Fraction} = \frac{5}{10}$$

7. Smallest decimal numbers = 12.42

Largest decimal numbers = 42.12

8. On dividing 1 m into 10 equal parts,

$$\text{i.e., } \frac{1}{10} = 0.1 \text{ m or } 10 \text{ cm}$$

Thus, each equal part is 0.1 m, i.e., 1 tenths.

Mental Maths (Page 137)

1. (a) 10 coloured strips are here.

$$(b) (i) \text{Fraction of yellow strips} = \frac{5}{10}$$

Decimal number of yellow strips = 0.5

$$(ii) \text{Fraction of blue strips} = \frac{2}{10}$$

Decimal number of blue strips = 0.2

$$(iii) \text{Fraction of peach strips} = \frac{3}{10}$$

Decimal number of peach strips = 0.3

2.

	Ones	•	Tenths	Hundredths	Decimal
(a) 9 tenths	0	•	9		0.9
(b) 5 and 7 tenths 6 hundredths	5	•	7	6	5.76
(c) 1 and 4 hundredths	1	•	0	4	1.04
(d) 5 and 47 hundredths	5	•	4	7	5.47

Brain Sizzlers (Page 138)

1. Hundredths digit = largest one-digit prime number = 7

Ones digit = largest one-digit composite number = 9

Tens digit = smallest prime number = 2

Tenths digit = double of tens digit = $2 \times 2 = 4$

Hence, the decimal number is 29.47.

MODEL TEST PAPER - 1

A.

1. (a) 6 thousands less than

$$23,485 = 29,485 - 6000 = 23.485.$$

2. (c) Product of $3000 \times 140 = 4,20,000$.

3. (a) Annual salary of Rehana = ₹1,20,000

$$\text{Monthly salary of Rehana} = \text{₹} \frac{120000}{12} = \text{₹}10,000$$

Hence, monthly salary of Rehana is ₹10,000.

Detailed Solutions

4. (c) When two or more numbers are multiplied together the result is called product.

5. (b) All the factors of 12 are 1, 2, 3, 4, 6, 12.

6. (c) If the digit at its ones place is 0 or 5, then the number is divisible by 5.

7. (c) $18001 + 1999 = 20,000$
Successor of 20,000 = 20,000 + 1 = 20,001

8. (a) Painter painted of a wall on 1st day = $\frac{2}{5}$
Painter painted of a wall on end day = $\frac{1}{5}$.
Painter painted of a wall in both days
 $= \frac{2}{5} + \frac{1}{5} = \frac{2+1}{5} = \frac{3}{5}$

9. (d) Place value of 8 in 37.18 is $\frac{8}{100}$.

B.

1. $4,13,632 = 4,00,000 + 10,000 + 3,000 + 600 + 30 + 2$.

2. The number 3000 more than 97,000 = $97,000 + 3,000 = 1,00,000$.

3. $(15 \times 14) \times 13 = 15 \times (14 \times 13)$.

4. Dividend is exactly divisible by the division if the remainder is zero.

5. 6 is the smallest multiple of 1, 2, 3 and 6.

6. $\frac{4}{7} + \frac{3}{7} = \frac{4+3}{7} = \frac{7}{7} = 1$

7. $215.75 = 200 + 10 + 5 + 0.7 + 0.05$

C.

1. Number of sea shells collected by Ranjana = 224
Number of sea shells required to make a necklace = 32
Number of necklace can she make $\frac{32}{224} (7)$
 $= 224 \div 32 = 7$
Thus, 7 necklaces can she make.

2. Amit gave one-tenth of chocolate to each of his 5 friends portion of the chocolate is left with him = $\frac{1}{10}$ of 5.
 $= \frac{1}{10} \times 5 = \frac{5}{10} = \frac{1}{2}$

3. Number of men = 4,65,234
Number of women = 4,60,556
Number of children = 2,78,954

Total population of the city

$$= 4,65,234 + 4,60,556 + 2,78,954 = 12,04,744$$

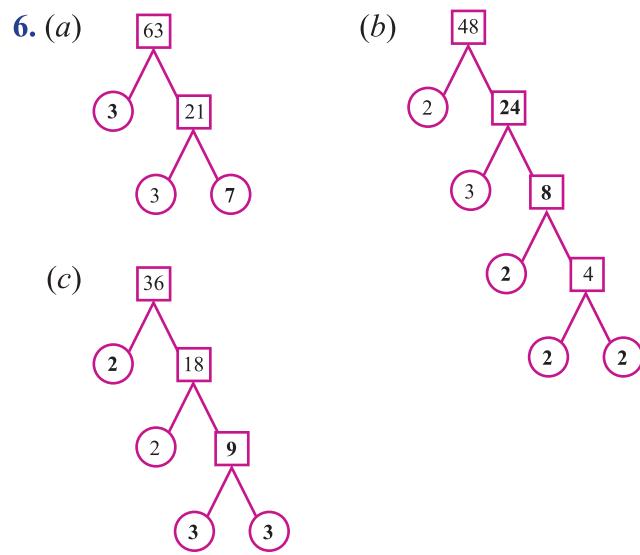
2	1	1	1	1	1
4	6	5	2	3	4
4	6	0	5	5	6
+	2	7	8	9	5
1	2	0	4	7	4

Population of the city to the nearest hundred is 12,04,700

4. Number of chairs arranged equally in 80 rows = 3657
 $\frac{3657}{80} (45)$
Number of chairs in each row
 $= 3657 \div 80$

Thus, 45 chairs arranged in 80 rows and 57 chairs are left.

5. Distance travelled in the first part = 2,450 km
Distance travelled in the second part = 3,500 km
Distance travelled in the third part = 2,700 km
Total distance travelled in 1st to 3rd part = $2450 + 3500 + 2700 = 3650$ km
Total distance between the two major cities = 12,600 km
The distance need to be covered in the fourth part = $12,600 \text{ km} - 8650 \text{ km} = 3950 \text{ km}$
Thus, 3950 km distance to be covered in fourth part to complete the journey.



7. $\frac{1}{3} = \frac{2}{\boxed{6}} = \frac{3}{\boxed{9}} = \frac{4}{\boxed{12}} = \frac{5}{\boxed{15}} = \frac{6}{\boxed{18}} = \frac{7}{\boxed{21}}$

CHAPTER 8 : GEOMETRY

Let's Recall

1. (a) A solid with one curved face, 1 circular face and 1 corner is a cone.
- (b) A solid with 12 edges and 6 rectangular faces is a cuboid.
- (c) A 2-dimensional shape without any edge is a circle.

Practice Time 8A

1. (a) A point has no length, breadth or height.
- (b) A line segment has definite length.
- (c) A ray can extend in one direction.
- (d) A line has no end point(s).
2. (a) Point P (b) Line \overline{ST}
(c) Ray \overline{DC} (d) Line segment \overline{UV}
3. (a) Rays \overline{OA} , \overline{OB} , \overline{OC} , \overline{OD}
(b) Rays \overline{OA} , \overline{OB} , \overline{OC} , \overline{OF} , \overline{OE} , \overline{OF} , \overline{OG} , \overline{OH}
(c) Rays \overline{PA} , \overline{PB} , \overline{PH} , \overline{PG} , \overline{DF} , \overline{CE} , \overline{CH} , \overline{DG}
4. (a) Three points = P, Q, R (Answer may vary)
(b) Two line segments = \overline{PQ} , \overline{PR}
(Answer may vary)
(c) Three rays = \overline{QX} , \overline{QY} , \overline{PX} (Answer may vary)
(d) A line = \overline{PR}

Think and Answer (Page 145)

Railway tracks, Edges of a ruler, Zebra crossing, Ruled paper, etc.

Think and Answer (Page 146)

Partially open doors, A pair of scissors, Hands of a clock, Cycle spokes, etc.

Practice Time 8B

1. (a) Intersecting lines (b) Parallel lines
(c) Perpendicular lines (d) Intersecting lines
(e) Intersecting lines (f) Perpendicular lines
2. (a) Arms = \overline{OA} , \overline{OB} ; Vertex = O;
Angle = $\angle AOB$
(b) Arms = \overline{BA} , \overline{BC} ; Vertex = B;
Angle = $\angle ABC$
(c) Arms = \overline{QP} , \overline{QR} ; Vertex = Q; Angle = $\angle PQR$

Practice Time 8C

2. Simple closed figure = (b), (c), (e), (f) and (h)
3. We know that, simple closed figures which are made with only line segments are called polygons. Therefore, (a), (b), (c) and (e) are polygons.
4. (a) Sides of polygons = \overline{AB} , \overline{BC} , \overline{CD} and \overline{DA}
(b) Sides of polygons = \overline{XY} , \overline{YZ} and \overline{ZX}
(c) Sides of polygons = \overline{MN} , \overline{NO} , \overline{OP} and \overline{PM}
(d) Sides of polygons = \overline{AB} , \overline{BC} , \overline{CD} , \overline{DE} and \overline{EA}
5. (a) All squares are rectangles. True
(b) All rectangles are squares. False
(c) A polygon has two sides. False
(d) There are four vertices in any squares. True
(e) All quadrilaterals are rectangles. False

Practice Time 8D

1. (a) A circle is a polygon. False
(b) All radii (Plural of radius) of a circle are of equal length. True
(c) All diameters of a circle are of equal length. True
(d) A circle has only one diameter. False
(e) A circle has only one centre. True
(f) The radius is half of the diameter of a circle. True

2. (a) Centre = O; radius = OA, OB and OC; diameter = BC
(b) Centre = O; radius = OA, OB; diameter = AB
3. (a) Radius = OA (b) Diameter = AB
5. (a) Radius = 10 cm (given)
We know that,
Diameter = $2 \times$ radius
 \therefore Diameter = 2×10 cm = 20 cm
(b) Radius = 13 cm (given)
We know that,
Diameter = $2 \times$ radius
 \therefore Diameter = 2×13 cm = 26 cm

Detailed Solutions

(c) Radius = 9 cm (given)

We know that,

$$\text{Diameter} = 2 \times \text{radius}$$

$$\therefore \text{Diameter} = 2 \times 9 \text{ cm} = 18 \text{ cm}$$

(d) Radius = 5 cm (given)

We know that

$$\text{Diameter} = 2 \times \text{radius}$$

$$\therefore \text{Diameter} = 2 \times 5 \text{ cm} = 10 \text{ cm}$$

(e) Radius = 7 cm (given)

We know that,

$$\text{Diameter} = 2 \times \text{radius}$$

$$\therefore \text{Diameter} = 2 \times 7 \text{ cm} = 14 \text{ cm}$$

6. (a) Diameter = 12 cm (given)

We know that,

$$\text{Radius} = \frac{\text{Diameter}}{2}$$

$$\text{Radius} = \frac{12}{2} \text{ cm} = 6 \text{ cm}$$

(b) Diameter = 40 cm (given)

We know that,

$$\text{Radius} = \frac{\text{Diameter}}{2}$$

$$\text{Radius} = \frac{40}{2} \text{ cm} = 20 \text{ cm}$$

(c) Diameter = 26 cm (given)

We know that,

$$\text{Radius} = \frac{\text{Diameter}}{2}$$

$$\text{Radius} = \frac{26}{2} \text{ cm} = 13 \text{ cm}$$

(d) Diameter = 64 cm (given)

We know that,

$$\text{Radius} = \frac{\text{Diameter}}{2}$$

$$\text{Radius} = \frac{64}{2} \text{ cm} = 32 \text{ cm}$$

(e) Diameter = 80 cm

We know that,

$$\text{Radius} = \frac{\text{Diameter}}{2}$$

$$\text{Radius} = \frac{80}{2} \text{ cm} = 40 \text{ cm}$$

Practice Time 8E

1.	Name of shape	No. of face(s)	No. of plane face(s)	No. of curved face(s)	No. of edge(s)	No. of vertices
(a)	Cube	6	6	0	12	8
(b)	Cuboid	6	6	0	12	8
(c)	Cylinder	3	2	1	2	0
(d)	Cone	2	1	1	1	1
(e)	Sphere	1	0	1	0	0
(f)	Hemisphere	2	1	1	1	0

2. (a) Only curved face = Football, Globe (Answer may vary)

(b) Only flat face = Rubik cube, Dice (Answer may vary)

3. (b), (c) can be used to form a cube.

Chapter Assessment

1. (a) – (iv) 8 line segments

(b) – (iv) 6 rectangles

(c) – (iv) The greatest distance between two points of a circle is diameter

(d) – (iii) A solid with no vertex is hemisphere.

(e) – (ii) Two cubes of the same size put together form a cuboid.

(f) – (ii) Point.

2. (a) Five points = A, B, O, D, E (Answer may vary)

(b) A line = \overline{BF} (Answer may vary)

(c) Four rays = \overline{OA} , \overline{OB} , \overline{OD} , \overline{OF}

(d) A line segment = \overline{OE}

3. (a) Line segment BE is parallel to \overline{AD} .

(b) Line segment BC is perpendicular to \overline{AB} and \overline{CD} .

(c) Line segment AC is parallel to line segment DE.

(d) \overline{AC} and \overline{BD} intersect at point O.

4. Capital letters of the English alphabet using 4 line segments are E, M, W.

5. (a) O = centre (b) \overline{OB} = radius

(c) \overline{OC} = radius (d) \overline{CD} = diameter

6. (a) There are three circles in the image.

(b) Centre of the largest circle = O

Diameter of the largest circle = AB
 Radii of the largest circle = OA, OB
 (c) OA = 7 cm
 AB = $2 \times$ OA
 AB = 2×7 cm = 14 cm

7.	Radius	8 cm	9 cm	2 cm	5 cm	4 cm
	Diameter	16 cm	18 cm	4 cm	10 cm	8 cm

8. (c)

Brain Sizzlers (Page 156)

1. We know that radius = $\frac{\text{diameter}}{2}$

$$\therefore r = \frac{16}{2} = 8 \text{ cm}$$

The radius of the given circle is 8 cm.

2. The diameter of the given circle is 16 cm.

Mental Maths (Page 156)

1. Circle have no vertices.
2. Yes, semicircles have a line segment.
3. No, circle is not a quadrilateral.
4. Minimum sides of a polygon is 3.
5. No, diameter is not shorter than the radius of the circle because diameter = $2 \times$ radius.

CHAPTER 9 : SYMMETRY AND PATTERNS

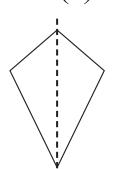
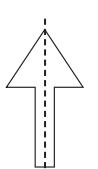
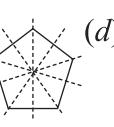
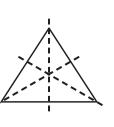
Let's Recall

1. (a) and (b)
2. (a)  (b) 100000

Think and Answer (Page 160)

Yes, line of symmetry = 0, 3 and 8.

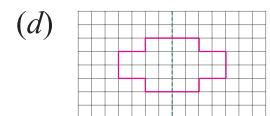
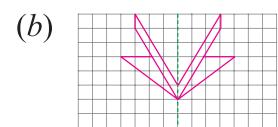
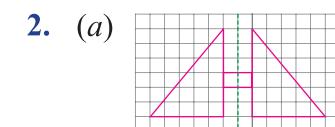
Practice Time 9A

1. Symmetrical figures are (a), (e) and (f).
2. (a)  (b)  (c)  (d) 
3. (a) and (c)
4. (a)  (b)  (c)  (d) 

Detailed Solutions

Practice Time 9B

1. (b), (d), (e) and (f)



Think and Answer (Page 165)

Given number pattern is 26, 28, 28, 30, 30, 28, 32, 30, 34.

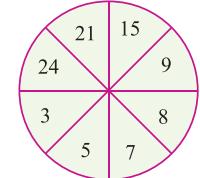
Practice Time 9C

1. (a) 1, 4, 7, 10, 13, 16, 19, 22, 25
 (b) 3, 12, 21, 30, 39, 48, 57, 66
 (c) 7, 11, 15, 19, 23, 27, 31, 35, 39
 (d) 512, 256, 128, 64, 32, 16, 8

2. (a) $1234 \times 9 + 5 = 11111$
 $12345 \times 9 + 6 = 111111$
 (b) $9876 \times 9 + 4 = 88888$
 $98765 \times 9 + 3 = 888888$
 (c) $12345 \times 8 + 5 = 98765$
 $123456 \times 8 + 6 = 987654$
 (d) $20000 \div 2000 = 10$
 $20000 \div 20000 = 1$

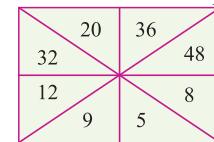
3. (a) $555 \times 5 = 2775$ (b) $37 \times 3 \times 3 = 333$
 $5555 \times 5 = 27775$ $37 \times 3 \times 5 = 555$
 $55555 \times 5 = 277775$

4. (a) Rule: $3 \times 3 = 9$, $5 \times 3 = 15$, $7 \times 3 = 21$,
 (i.e., each number is multiplied by 3)



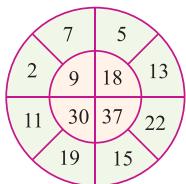
Hence, the missing number = $8 \times 3 = 24$.

5. (a) Rule: $9 \times 4 = 36$, $8 \times 4 = 32$, $12 \times 4 = 48$
 (i.e., each number is multiplied by 4).



Hence, the missing number = $5 \times 4 = 20$.

(c) Rule: $2 + 7 = 9$, $5 + 13 = 18$, $22 + 15 = 37$
(i.e., addition of two numbers is equal to the number inside the circle)



Hence, the missing number $= 19 + 11 = 30$.

Practice Time 9D

1.(a), (b), (e), (f)

Think and Answer (Page 169)

9 12 15 22 5 9 14 4 9 1
I L O V E I N D I A

Practice Time 9E

1. (a) 2 5 8 5 18 5 14 15 23
(b) 2 5 12 9 5 22 5 9 14 25 15 21 18 19 5 12 6
(c) 4 15 9 20 14 15 23
(d) 4 15 25 15 21 18 2 5 19 20
(e) 4 18 5 1 13 19 3 15 13 5 20 18 21 5

2. (a) FOCUS AND WIN
(b) IT IS POSSIBLE
(c) YES YOU CAN
(d) NEVER GIVE UP

Mental Maths (Page 169)

1. (a) A triangle whose two sides are equal has 1 line of symmetry.

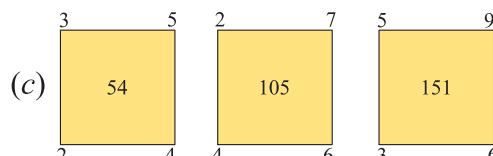
2. (d) 2, 4, 8, 16

3. (c)

Chapter Assessment

1. (a) (i) Circle has infinite lines of symmetry.
(b) (iii) 918
 $(\because 123 \times 7 = 861, 51 \times 7 = 357,$
 $51 \times 9 = 459, \therefore 102 \times 9 = 918)$

Hence, the missing number is 918.



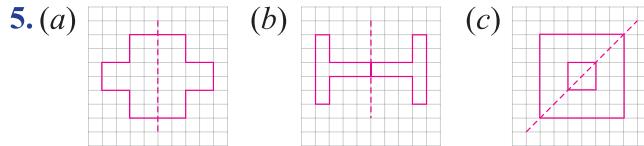
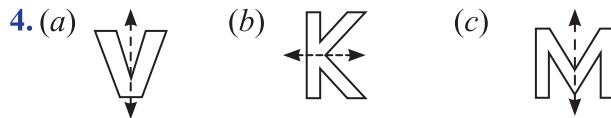
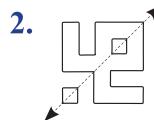
From Fig. 1 = Sum of square of vertices
 $= (3)^2 + (5)^2 + (2)^2 + (4)^2$
 $= 9 + 25 + 4 + 16 = 54$

From Fig. 2 = Sum of square of vertices
 $(2)^2 + (7)^2 + (4)^2 + (6)^2$
 $= 4 + 49 + 16 + 36 = 105$

From Fig 3 = Sum of squares of vertices
 $= (5)^2 + (9)^2 + (3)^2 + (6)^2$
 $= 25 + 81 + 9 + 36 = 151$

Hence, the missing number is 151.

4. (d) (iv) There are 15 circles in pattern 8.



6. (a), (d).

7. ABC, ZYX, DEF, WVU, GHI, TSR

8. 4 ($\because 6 \times 7 = 42, 7 \times 9 = 63, 4 \times 9 = 36$)

9. (a) $8000 + 1000 = 9000, 80000 + 10000 = 90000$

(b) $1234 \times 9 + 5 = 11111$

$12345 \times 9 + 6 = 111111$

(c) $3333 \times 3 = 9999, 33333 \times 3 = 99999$

(d) $24000 \div 8 = 3000, 240000 \div 8 = 30000$

10. (a) 5 14 10 15 25 12 9 6 5

(b) 20 18 25 17 19 14

(c) 19 20 125 16 15 19 9 20 9 22 5

11. (a) HOW ARE YOU

(b) CHANGE IS GOOD

(c) PLANT MORE TREES

CHAPTER 10 : MEASUREMENTS

Let's Recall

1. (a) We know that, $1\text{ m} = 100\text{ cm}$
 $\therefore 40\text{ m and } 15\text{ cm} = (40 \times 100)\text{ cm} + 15\text{ cm}$
 $= 4000\text{ cm} + 15\text{ cm} = 4015\text{ cm}$

(b) We know that, $1\text{ kg} = 1000\text{ g}$
 $\therefore 4\text{ kg } 200\text{ g} = (4 \times 1000)\text{ g} + 200\text{ g}$
 $= 4000\text{ g} + 200\text{ g} = 4200\text{ g}$

(c) We know that, $1\text{ L} = 1000\text{ mL}$
 $\therefore 18\text{ L } 180\text{ mL} = (18 \times 1000)\text{ mL} + 180\text{ mL}$
 $= 18000\text{ mL} + 180\text{ mL} = 18180\text{ mL}$

2. (a)

cm	mm
1	9
2	5
3	4

 (b)

kg	g
6	13
7	5
3	4
3	5
3	4

Thus, $11\text{ cm } 9\text{ mm} + 27\text{ cm } 5\text{ mm} = 39\text{ cm } 4\text{ mm}$
 $540\text{ g} - 395\text{ g} = 345\text{ g}$

(c)

L	mL
8	4
7	10
4	0
4	0

Thus, $87\text{ L } 500\text{ mL} - 43\text{ L } 250\text{ mL} = 44\text{ L } 250\text{ mL}$

Practice Time 10A

1. (a) We have, $1\text{ m} = 100\text{ cm}$
 $\text{So, } 63\text{ m} = 63 \times 100\text{ cm} = 6300\text{ cm}$

(b) We have, $1\text{ m} = 100\text{ cm}$
 $\text{So, } 150\text{ m} = (150 \times 100)\text{ cm} = 15000\text{ cm}$

(c) We have, $1\text{ m} = 100\text{ cm}$
 $\text{So, } 16\text{ m } 40\text{ cm} = (16 \times 100)\text{ cm} + 40\text{ cm}$
 $= 1600\text{ cm} + 40\text{ cm} = 1640\text{ cm}$

(d) We have, $1\text{ m} = 100\text{ cm}$
 $\text{So, } 30\text{ m } 5\text{ cm} = (30 \times 100)\text{ cm} + 5\text{ cm}$
 $= 3000\text{ cm} + 5\text{ cm} = 3005\text{ cm}$

2. (a) We have, $1\text{ cm} = 10\text{ mm}$
 $\text{So, } 29\text{ cm} = (29 \times 10)\text{ mm} = 290\text{ mm}$

(b) We have, $1\text{ cm} = 10\text{ mm}$
 $\text{So, } 180\text{ cm} = (180 \times 10)\text{ mm} = 1800\text{ mm}$

(c) We have, $1\text{ cm} = 10\text{ mm}$
 $\text{So, } 16\text{ cm } 3\text{ mm} = (16 \times 10)\text{ mm} + 3\text{ mm}$
 $= 160\text{ mm} + 3\text{ mm} = 163\text{ mm}$

(d) We have, $1\text{ cm} = 10\text{ mm}$
 $\text{So, } 25\text{ cm } 8\text{ mm} = (25 \times 10)\text{ mm} + 8\text{ mm}$
 $= 250\text{ mm} + 8\text{ mm} = 258\text{ mm}$

3. (a) We have, $1\text{ km} = 1000\text{ m}$
 $\text{So, } 24\text{ km} = (24 \times 1000)\text{ m} = 24000\text{ m}$

(b) We have, $1\text{ km} = 1000\text{ m}$
 $\text{So, } 96\text{ km} = (96 \times 1000)\text{ m} = 96000\text{ m}$

(c) We have, $1\text{ km} = 1000\text{ m}$
 $\text{So, } 8\text{ km } 417\text{ m} = (8 \times 1000)\text{ m} + 417\text{ m}$
 $= 8000\text{ m} + 417\text{ m} = 8417\text{ m}$

(d) $26\text{ km } 42\text{ m} = (26 \times 1000)\text{ m} + 42\text{ m}$
 $(\because 1\text{ km} = 1000\text{ m})$
 $= 26000\text{ m} + 42\text{ m} = 26042\text{ m}$

4. (a) We have, $1\text{ m} = 10\text{ dm}$
 $\text{So, } 39\text{ m} = (39 \times 10)\text{ dm} = 390\text{ dm}$

(b) We have, $1\text{ m} = 10\text{ dm}$
 $\text{So, } 118\text{ m} = (118 \times 10)\text{ dm} = 1180\text{ dm}$

(c) We have, $1\text{ m} = 10\text{ dm}$
 $\text{So, } 19\text{ m } 9\text{ dm} = (19 \times 10)\text{ dm} + 9\text{ dm}$
 $= 190\text{ dm} + 9\text{ dm} = 199\text{ dm}$

(d) We have, $1\text{ m} = 10\text{ dm}$
 $\text{So, } 109\text{ m } 2\text{ dm} = (109 \times 10)\text{ dm} + 2\text{ dm}$
 $= 1090\text{ dm} + 2\text{ dm} = 1092\text{ dm}$

5. (a) We have, $1\text{ km} = 100\text{ dam}$
 $\text{So, } 13\text{ km} = (13 \times 100)\text{ dam} = 1300\text{ dam}$

(b) We have, $1\text{ hm} = 10\text{ dam}$
 $\text{So, } 18\text{ hm} = (18 \times 10)\text{ dam} = 180\text{ dam}$

(c) We have, $1\text{ km} = 100\text{ dam}$ and $1\text{ hm} = 10\text{ dam}$
 $\text{So, } 5\text{ km } 10\text{ hm} = (5 \times 100)\text{ dam} + (10 \times 10)\text{ dam}$
 $= 500\text{ dam} + 100\text{ dam} = 600\text{ dam}$

6. (a) We know that,
 $1\text{ km} = 1000\text{ m}$, $1\text{ hm} = 100\text{ m}$, $1\text{ dam} = 10\text{ m}$
 $2\text{ km } 1\text{ hm } 6\text{ dam } 8\text{ m} = (2 \times 1000)\text{ m}$
 $+ (1 \times 100)\text{ m} + (6 \times 10)\text{ m} + 8\text{ m}$
 $= 2000\text{ m} + 100\text{ m} + 60\text{ m} + 8\text{ m} = 2168\text{ m}$

(b) We know that,
 $1\text{ km} = 1000\text{ m}$, $1\text{ hm} = 100\text{ m}$, $1\text{ dam} = 10\text{ m}$.
 $12\text{ km } 6\text{ hm } 9\text{ dam } 4\text{ m} = (12 \times 1000)\text{ m}$
 $+ (6 \times 100)\text{ m} + (9 \times 10)\text{ m} + 4\text{ m}$
 $= 12000\text{ m} + 600\text{ m} + 90\text{ m} + 4\text{ m} = 12694\text{ m}$

7. (a) We have, $10\text{ mm} = 1\text{ cm}$
 $\text{So, } 105\text{ mm} = 100\text{ mm} + 5\text{ mm}$
 $= (100 \div 10)\text{ cm} + 5\text{ mm} = 10\text{ cm } 5\text{ mm}$

Detailed Solutions

(b) We have, $100 \text{ cm} = 1 \text{ m}$

$$\text{So, } 685 \text{ cm} = 600 \text{ cm} + 85 \text{ cm}$$

$$= (600 \div 100) \text{ m} + 85 \text{ cm} = 6 \text{ m } 85 \text{ cm}$$

(c) We have, $1000 \text{ m} = 1 \text{ km}$

$$\text{So, } 8000 \text{ m} = (8000 \div 1000) \text{ km} = 8 \text{ km}$$

(d) We have, $1000 \text{ m} = 1 \text{ km}$

$$\text{So, } 16300 \text{ m} = 16000 \text{ m} + 300 \text{ m}$$

$$= (16000 \div 1000) \text{ km} + 300 \text{ m} = 16 \text{ km } 300 \text{ m}$$

8. (a) We have, $1 \text{ foot} = 12 \text{ inches}$

$$\text{Therefore, } 18 \text{ ft} = 18 \times 12 \text{ in} = 216 \text{ in}$$

(b) We have, $1 \text{ foot} = 12 \text{ inches}$

$$\text{Therefore, } 5 \text{ ft } 24 \text{ in} = (5 \times 12) \text{ in} + 24 \text{ in}$$

$$= 60 \text{ in} + 24 \text{ in} = 84 \text{ in}$$

(c) We have, $12 \text{ inches} = 1 \text{ foot}$

To convert inches to ft, $12 \overline{)108} \quad (9 \rightarrow \text{Quotient}$
we will divide by 12. $\underline{-108} \quad 0 \rightarrow \text{Remainder}$

Therefore,

$$108 \text{ in} = (108 \div 12) \text{ ft} = 9 \text{ ft.}$$

(d) We have, $12 \text{ in} = 1 \text{ ft}$

To convert inches to ft, we will divide by 12.

Therefore, $12 \overline{)141} \quad (11 \rightarrow \text{Quotient}$

$$\begin{array}{r} 12 \\ \underline{-12} \\ 021 \\ -12 \\ \hline 09 \end{array}$$

$\rightarrow \text{Remainder}$

Here, the quotient becomes feet (ft) and the remainder becomes inch (in).

$$\text{So, } 141 \text{ in} = 11 \text{ ft } 9 \text{ in.}$$

Practice Time 10B

1. (a)

km	m	cm
①	① ① ①	①
2 4	1 7 5	4 2
1 3	1 0 4	5 3
+ 0 5	0 8 1	0 9
4 2	3 6 1	0 4

$$\text{Thus, } 24 \text{ km } 175 \text{ m } 42 \text{ cm} + 13 \text{ km } 104 \text{ m } 53 \text{ cm} + 05 \text{ km } 81 \text{ m } 9 \text{ cm} = 42 \text{ km } 361 \text{ m } 4 \text{ cm.}$$

(b)

m	cm	mm
	① ① ①	
2 1 3	3 8	6
1 4 1	4 3	5
+ 1 2 0	9 1	7
4 7 5	7 3	8

$$\text{Thus, } 213 \text{ m } 38 \text{ cm } 6 \text{ mm} + 141 \text{ m } 43 \text{ cm } 5 \text{ mm} + 120 \text{ m } 91 \text{ cm } 7 \text{ mm} = 475 \text{ m } 73 \text{ cm } 8 \text{ mm.}$$

(c)

km	m	cm	mm
①	① ② ①	①	
1 8	2 1 8	4 3	2
2 4	1 4 8	3 7	5
+ 3 4	2 3 3	7 2	2
7 6	6 0 0	5 2	9

$$\text{Thus, } 18 \text{ km } 218 \text{ m } 43 \text{ cm } 2 \text{ m} + 24 \text{ km } 148 \text{ m}$$

$$37 \text{ cm } 5 \text{ mm} + 34 \text{ km } 233 \text{ m } 72 \text{ cm } 2 \text{ mm}$$

$$= 76 \text{ km } 600 \text{ m } 52 \text{ cm } 9 \text{ mm.}$$

2. (a)

km	m
(11)	
⑥ (X)	(11) ⑧ (11)
✓ ✓	✓ ✓ ✓ ✓
- 1 8	3 5 7
5 3	8 3 4

$$\text{Thus, } 72 \text{ km } 191 \text{ m} - 18 \text{ km } 357 \text{ m} = 53 \text{ km } 834 \text{ m}$$

(b)

m	cm	mm
	(9) (12)	
(3)	(10) (2)	(18)
5 ✓	✓ ✓ ✓	✓
- 1 0	9 8	9
4 3	0 4	9

$$\text{Thus, } 54 \text{ m } 3 \text{ cm } 8 \text{ mm} - 10 \text{ m } 98 \text{ cm } 9 \text{ mm}$$

$$= 43 \text{ m } 4 \text{ cm } 9 \text{ mm.}$$

(c)

km	m	cm
		(15)
(4) (14)	(3) (5) (13)	(2) (11)
1 ✓ ✓	✓ ✓ ✓ ✓	✓ ✓
- 4 6	1 8 7	2 6
1 0 8	2 7 6	0 5

$$\text{Thus, } 154 \text{ km } 463 \text{ m } 31 \text{ cm} - 46 \text{ km } 187 \text{ m } 26 \text{ cm} = 108 \text{ km } 276 \text{ m } 5 \text{ cm.}$$

3. (a)

m	cm
(1) (1)	(1)
2 8	6 5
+ 7	5 6
3 6	2 1

$$\text{Thus, } 28 \text{ m } 65 \text{ cm} + 7 \text{ m } 56 \text{ cm} = 36 \text{ m } 21 \text{ cm.}$$

(b)

m	cm
(12)	(15)
(4) (2)	(5) (14)
✓ ✓	✓ ✓ ✓
- 2 5	6 9
2 7	9 5

$$\text{Thus, } 53 \text{ m } 64 \text{ cm} - 25 \text{ m } 69 \text{ cm} = 27 \text{ m } 95 \text{ cm.}$$

km	m	cm
14	9	
5	4	10
10	5	10
16	275	18
48	770	22

Thus, $65 \text{ km } 45 \text{ m } 40 \text{ cm} - 16 \text{ km } 275 \text{ m } 18 \text{ cm} = 48 \text{ km } 770 \text{ m } 22 \text{ cm}$.

km	m	cm
1	11	1
29	126	08
29	77	36
58	203	44

Thus, $29 \text{ km } 126 \text{ m } 08 \text{ cm} - 29 \text{ km } 77 \text{ m } 36 \text{ cm} = 58 \text{ km } 203 \text{ m } 44 \text{ cm}$.

4.

m	cm
17	16
8	42
8	74

Total length of wool roll =

Length of cutting piece of wool =

Length of wool left in the roll =

Thus, 8 m 7 cm length of wool left in the roll.

5.

km	m
218	325
58	218
04	705
281	248

Thus, Rohan travelled 281 km 248 m in all.

6.

km	m
6259	600
359	700

Total length of actual and trenches =

km	m
6619	300

km	m
8851	800

Total length of actual and trenches =

km	m
6619	300

km	m
2232	500

Thus, 2232 km 500 m length of natural barriers make the great wall of China.

Think and Answer (Page 184)

Both are of equal quantity.

Practice Time 10C

1. (a) We have, $1 \text{ kg} = 1000 \text{ g}$

So, $26 \text{ kg} = (26 \times 1000) \text{ g} = 26000 \text{ g}$

(b) We have, $1 \text{ kg} = 1000 \text{ g}$

So, $320 \text{ kg } 45 \text{ g} = 320 \text{ kg} + 45 \text{ g}$
 $= (320 \times 1000) \text{ g} + 45 \text{ g}$
 $= 320000 \text{ g} + 45 \text{ g} = 320045 \text{ g}$

(c) We have, $1 \text{ g} = 1000 \text{ mg}$

So, $45 \text{ g} = (45 \times 1000) \text{ mg} = 45000 \text{ mg}$

(d) We have, $1 \text{ g} = 1000 \text{ mg}$

So, $140 \text{ g } 203 \text{ mg} = 140 \text{ g} + 203 \text{ mg}$

$= (140 \times 1000) \text{ mg} + 203 \text{ mg}$

$= 140000 \text{ mg} + 203 \text{ mg}$

$= 140203 \text{ mg}$.

2. (a) $9 \text{ kg } 1 \text{ hg } 4 \text{ dg } 5 \text{ g} = (9 \times 1000) \text{ g}$

$+ (1 \times 100) \text{ g} + (4 \times 10) \text{ g} + 5 \text{ g}$

$= 9000 \text{ g} + 100 \text{ g} + 40 \text{ g} + 5 \text{ g} = 9145 \text{ g}$

(b) $20 \text{ kg } 4 \text{ hg } 9 \text{ dag } 8 \text{ g} = (20 \times 1000) \text{ g}$

$+ (4 \times 100) \text{ g} + (9 \times 10) \text{ g} + 8 \text{ g}$

$= 20000 \text{ g} + 400 \text{ g} + 90 \text{ g} + 8 \text{ g} = 20498 \text{ g}$

3. (a) We have, $1000 \text{ g} = 1 \text{ kg}$

So, $9000 \text{ g} = (9000 \div 1000) \text{ kg} = 9 \text{ kg}$

(b) We have, $1000 \text{ g} = 1 \text{ kg}$

So, $4323 \text{ g} = 4000 \text{ g} + 323 \text{ g}$

$= (4000 \div 1000) \text{ kg} + 323 \text{ g}$

$= 4 \text{ kg } 323 \text{ g}$

(c) We have, $1000 \text{ g} = 1 \text{ kg}$

$3065 \text{ g} = 3000 \text{ g} + 65 \text{ g}$

$= (3000 \div 1000) \text{ kg} + 65 \text{ g} = 3 \text{ kg } 65 \text{ g}$

(d) We have, $1000 \text{ mg} = 1 \text{ g}$

So, $25605 \text{ mg} = 25000 \text{ mg} + 605 \text{ mg}$

$= (25000 \div 1000) \text{ g} + 605 \text{ mg}$

$= 25 \text{ g } 605 \text{ mg}$

4. (a) We have, $1 \text{ ton} = 10 \text{ quintals}$

Therefore, $14 \text{ tons} = 14 \times 10 = 140 \text{ quintals}$.

(b) We have, $1 \text{ quintal} = 100 \text{ kg}$

So, $125 \text{ quintals} = 125 \times 100 \text{ kg} = 12500 \text{ kg}$

(c) We have, $10 \text{ quintals} = 1 \text{ ton}$

So, $1200 \text{ quintals} = 1200 \div 10 = 120 \text{ ton}$

(d) We have, $1 \text{ ton} = 1000 \text{ kg}$ and $1 \text{ quintal} = 100 \text{ kg}$

So $13 \text{ tons } 8 \text{ quintals}$

$= (13 \times 1000) \text{ kg} + (8 \times 100) \text{ kg}$

$= 13000 \text{ kg} + 800 \text{ kg} = 13800 \text{ kg}$

Practice Time 10D

1. (a)

kg	g	mg
11	1	1
343	550	356
278	004	987
621	555	343

Thus, $343 \text{ kg } 550 \text{ g } 356 \text{ mg} + 278 \text{ kg } 4 \text{ g } 987 \text{ mg} = 621 \text{ kg } 555 \text{ g } 343 \text{ mg}$.

Detailed Solutions

kg	g	mg
6 0 0	5 4 0	0 8 3
+ 3 3 9	2 6 1	6 5 0
<u>9 3 9</u>	<u>8 0 1</u>	<u>7 3 3</u>

Thus, $600 \text{ kg } 540 \text{ g } 83 \text{ mg} + 339 \text{ kg } 261 \text{ g } 650 \text{ mg} = 939 \text{ kg } 801 \text{ g and } 733 \text{ mg.}$

kg	g	mg
12 10	9	
3 10 7	2 0 10	4 10 10
✓ ✓ ✓	✓ ✓ ✓	✓ ✓ ✓
- 1 4 5	6 7 5	3 9 5
<u>2 6 2</u>	<u>6 3 5</u>	<u>1 0 5</u>

Thus, $408 \text{ kg } 310 \text{ g } 500 \text{ mg} - 145 \text{ kg } 675 \text{ g } 395 \text{ mg} = 262 \text{ kg } 635 \text{ g } 105 \text{ mg.}$

kg	g	mg
9	13	
6 10 10	7 7 11	2 10
✓ ✓ ✓	✓ ✓ ✓	✓ ✓ 0
- 3 2 4	5 4 9	2 9 0
<u>3 7 6</u>	<u>2 9 2</u>	<u>0 1 0</u>

Thus, $700 \text{ kg } 841 \text{ g } 300 \text{ mg} - 324 \text{ kg } 549 \text{ g } 290 \text{ mg} = 376 \text{ kg } 292 \text{ g } 10 \text{ mg.}$

kg	g
1 1	1 1
3 8	9 4 6
+ 2 2	6 6 5
<u>6 1</u>	<u>6 1 1</u>

Thus, $38 \text{ kg } 946 \text{ g} + 22 \text{ kg } 665 \text{ g} = 61 \text{ kg } 611 \text{ g.}$

kg	g	mg
1 1	1 1	
2 6	4 3 0	4 0 0
+ 2 7	5 7 0	6 0 0
<u>5 4</u>	<u>0 0 1</u>	<u>0 0 0</u>

Thus, $26 \text{ kg } 430 \text{ g } 400 \text{ mg} + 27 \text{ kg } 570 \text{ g } 600 \text{ mg} = 54 \text{ kg } 1 \text{ g.}$

kg	g	mg
1 1	1	1
3 5	5 8 5	1 7
+ 2 8	8 9 4	0 8
<u>6 4</u>	<u>4 7 9</u>	<u>2 5</u>

Thus, $35 \text{ kg } 585 \text{ g } 17 \text{ mg} + 28 \text{ kg } 894 \text{ g } 08 \text{ mg} = 64 \text{ kg } 479 \text{ g } 25 \text{ mg.}$

kg	g	mg
3 6 0	0 0 0	1 8 3
+ 0 0 0	1 4 0	6 5 0
<u>3 6 0</u>	<u>1 4 1</u>	<u>4 2 0</u>

Thus, $360 \text{ kg } 870 \text{ mg} + 140 \text{ g } 550 \text{ mg} = 360 \text{ kg } 141 \text{ g } 420 \text{ mg.}$

kg	g
5 6	0 3 6
- 5 4	0 2 0
<u>0 2</u>	<u>0 1 6</u>

Thus, $56 \text{ kg } 36 \text{ g} - 54 \text{ kg } 20 \text{ g} = 2 \text{ kg } 16 \text{ g.}$

kg	g	mg
5 12	6 15 5	10
✓ ✓ 0	✓ ✓ ✓	✓ 8 0
- 5 8 0	0 9 0	4 5 0
<u>0 4 0</u>	<u>6 6 5</u>	<u>6 3 0</u>

Thus, $620 \text{ kg } 756 \text{ g } 80 \text{ mg} - 580 \text{ kg } 90 \text{ g } 450 \text{ mg} = 40 \text{ kg } 665 \text{ g } 630 \text{ mg.}$

kg	g	mg
1 15	3 10	10 8 10
✓ ✓ 0	✓ ✓ ✓	✓ ✓ ✓
- 1 8	0 2 8	3 8 9
<u>0 7</u>	<u>0 1 1</u>	<u>7 0 1</u>

Thus, $25 \text{ kg } 40 \text{ g } 90 \text{ mg} - 18 \text{ kg } 28 \text{ g } 389 \text{ mg} = 7 \text{ kg } 11 \text{ g } 701 \text{ mg.}$

kg	g	mg
9	9 13 13	12
4 10	10 10 10	12
3 10 10	0 1 1	7 5
- 1 1 0	0 6 7	8 6 0
<u>2 3 9</u>	<u>9 7 6</u>	<u>4 1 5</u>

Thus, $350 \text{ kg } 44 \text{ g } 275 \text{ mg} - 110 \text{ kg } 67 \text{ g } 860 \text{ mg} = 239 \text{ kg } 976 \text{ g } 415 \text{ mg.}$

Quick Check (Page 187)

4 litres of liquid is there in the container.

We know that, $1 \text{ L} = 1000 \text{ mL}$

$$\therefore 4 \text{ L} = 4 \times 1000 = 4000 \text{ mL}$$

Thus, the container has 4000 mL liquid.

Practice Time 10E

1. (a) We have, $1 \text{ L} = 1000 \text{ mL}$

$$\text{So, } 16 \text{ L} = (16 \times 1000) \text{ mL} = 16000 \text{ mL}$$

(b) We have, $1 \text{ dL} = 100 \text{ mL}$

$$\text{So, } 11 \text{ dL} = (11 \times 100) \text{ mL} = 1100 \text{ mL}$$

(c) We have, $1 \text{ L} = 1000 \text{ mL}$

$$\begin{aligned} \text{So, } 15 \text{ L } 350 \text{ mL} &= (15 \times 1000) \text{ mL} + 350 \text{ mL} \\ &= 15000 \text{ mL} + 350 \text{ mL} \\ &= 15350 \text{ mL} \end{aligned}$$

(d) We have, $1 \text{ dL} = 100 \text{ mL}$

$$\begin{aligned} \text{So, } 16 \text{ dL } 80 \text{ mL} &= (16 \times 100) \text{ mL} + 80 \text{ mL} \\ &= 1600 \text{ mL} + 80 \text{ mL} = 1680 \text{ mL} \end{aligned}$$

2. (a) We have, $1000 \text{ mL} = 1 \text{ L}$

$$\begin{aligned} \text{So, } 3500 \text{ mL} &= 3000 \text{ mL} + 500 \text{ mL} \\ &= (3000 \div 1000) \text{ L} + 500 \text{ mL} \\ &= 3 \text{ L } 500 \text{ mL} \end{aligned}$$

(b) We have, $1000 \text{ mL} = 1 \text{ L}$

$$\begin{aligned} \text{So, } 8756 \text{ mL} &= 8000 \text{ mL} + 756 \text{ mL} \\ &= (8000 \div 1000) \text{ L} + 756 \text{ mL} \\ &= 8 \text{ L } 756 \text{ mL} \end{aligned}$$

(c) We have, $1000 \text{ mL} = 1 \text{ L}$

$$\begin{aligned} \text{So, } 9767 \text{ mL} &= 9000 \text{ mL} + 767 \text{ mL} \\ &= (9000 \div 1000) \text{ L} + 767 \text{ mL} \\ &= 9 \text{ L } 767 \text{ mL} \end{aligned}$$

(d) We have, $1000 \text{ mL} = 1 \text{ L}$

$$\begin{aligned} \text{So, } 1808 \text{ mL} &= 1000 \text{ mL} + 808 \text{ mL} \\ &= (1000 \div 1000) \text{ L} + 808 \text{ mL} \\ &= 1 \text{ L } 808 \text{ mL} \end{aligned}$$

3. (a) We have $1 \text{ kL} = 1000 \text{ L}$

$$\text{So, } 26 \text{ kL} = (26 \times 1000) \text{ L} = 26000 \text{ L}$$

(b) We have, $1 \text{ hL} = 100 \text{ L}$

$$\text{So, } 30 \text{ hL} = (30 \times 100) \text{ L} = 3000 \text{ L}$$

(c) We have, $1 \text{ daL} = 10 \text{ L}$

$$\text{So, } 156 \text{ daL} = (156 \times 10) \text{ L} = 1560 \text{ L}$$

(d) We have, $1 \text{ kL} = 1000 \text{ L}$

$$\begin{aligned} \text{So, } 12 \text{ kL } 470 \text{ L} &= (12 \times 1000) \text{ L} + 470 \text{ L} \\ &= 12000 \text{ L} + 470 \text{ L} = 12470 \text{ L} \end{aligned}$$

(e) We have, $1 \text{ hL} = 100 \text{ L}$

$$\begin{aligned} \text{So, } 63 \text{ hL } 65 \text{ L} &= (63 \times 100) \text{ L} + 65 \text{ L} \\ &= 6300 \text{ L} + 65 \text{ L} = 6365 \text{ L} \end{aligned}$$

(f) We have, $1 \text{ kL} = 1000 \text{ L}$

$$\begin{aligned} \text{So, } 315 \text{ kL } 8 \text{ L} &= (315 \times 1000) \text{ L} + 8 \text{ L} \\ &= 315000 \text{ L} + 8 \text{ L} = 315008 \text{ L} \end{aligned}$$

(g) We have, $1 \text{ kL} = 1000 \text{ L}$, $1 \text{ hL} = 100 \text{ L}$

and $1 \text{ daL} = 10 \text{ L}$

So, $6 \text{ kL } 9 \text{ hL } 5 \text{ daL } 4 \text{ L}$

$$\begin{aligned} &= (6 \times 1000) \text{ L} + (9 \times 100) \text{ L} + (5 \times 10) \text{ L} + 4 \text{ L} \\ &= 6000 \text{ L} + 900 \text{ L} + 50 \text{ L} + 4 \text{ L} = 6954 \text{ L} \end{aligned}$$

(h) We have, $1 \text{ kL} = 1000 \text{ L}$, $1 \text{ hL} = 100 \text{ L}$

and $1 \text{ daL} = 10 \text{ L}$

So, $18 \text{ kL } 7 \text{ hL } 5 \text{ daL } 3 \text{ L}$

$$\begin{aligned} &= (18 \times 1000) \text{ L} + (7 \times 100) \text{ L} + (5 \times 10) \text{ L} + 3 \text{ L} \\ &= 18000 \text{ L} + 700 \text{ L} + 50 \text{ L} + 3 \text{ L} = 18753 \text{ L} \end{aligned}$$

4. (a) We have, $1000 \text{ L} = 1 \text{ kL}$

$$\text{So, } 13000 \text{ L} = (13000 \div 1000) \text{ kL} = 13 \text{ kL}$$

(b) We have, $1000 \text{ L} = 1 \text{ kL}$

$$\text{So, } 12000 \text{ L} = (12000 \div 1000) \text{ kL} = 12 \text{ kL}$$

(c) We have, $1000 \text{ L} = 1 \text{ kL}$

$$\text{So, } 6352 \text{ L} = 6000 \text{ L} + 352 \text{ L}$$

$$\begin{aligned} &= (6000 \div 1000) \text{ kL} + 352 \text{ L} \\ &= 6 \text{ kL } 352 \text{ L} \end{aligned}$$

(d) We have, $1000 \text{ L} = 1 \text{ kL}$

$$\text{So, } 2008 \text{ L} = 2000 \text{ L} + 8 \text{ L}$$

$$\begin{aligned} &= (2000 \div 1000) \text{ kL} + 8 \text{ L} \\ &= 2 \text{ kL } 8 \text{ L} \end{aligned}$$

Practice Time 10F

1. (a)

kL	L	mL
8	1 3 5	2 4 5
7	0 6 3	1 0 7
1 5	1 9 8	3 5 2

Thus, $8 \text{ kL } 135 \text{ L } 245 \text{ mL} + 7 \text{ kL } 63 \text{ L } 107 \text{ mL} = 15 \text{ kL } 198 \text{ L } 352 \text{ mL}$.

(b)

L	mL
9	11
7 10	16
1 8 9	2 5
5 9	4 7 0
1 2 0	7 9 5

Thus, $180 \text{ L } 265 \text{ mL} - 59 \text{ L } 470 \text{ mL}$

$= 120 \text{ L } 795 \text{ mL}$.

(c)

kL	L	mL
3 15		2 14
7 8	3 9 5	0 7 4
2 8	0 6 5	0 2 8
1 7	3 3 0	0 0 6

Thus, $45 \text{ kL } 395 \text{ L } 34 \text{ mL} - 28 \text{ kL } 65 \text{ L } 28 \text{ mL} = 17 \text{ kL } 330 \text{ L } 6 \text{ mL}$.

Detailed Solutions

L	mL
1	1 1
5 0	7 2 5
1 8	8 0
+ 1 0	2 2 5
<hr/>	0 3 0

Thus, $50 \text{ L } 725 \text{ mL} + 18 \text{ L } 80 \text{ mL} + 10 \text{ L } 225 \text{ mL} = 79 \text{ L } 30 \text{ mL}$.

kL	L
1 1	
3 2	8 6 4
+ 1 8	4 3 5
<hr/>	2 9 9

Thus, $32 \text{ kL } 864 \text{ L} + 18 \text{ kL } 435 \text{ L} = 51 \text{ kL } 299 \text{ L}$.

kL	L	mL
		1
9	0 7 2	0 7 0
+ 8	0 2 5	7 5 0
<hr/>	0 9 7	8 2 0

Thus, $9 \text{ kL } 72 \text{ L } 70 \text{ mL} + 8 \text{ kL } 25 \text{ L } 750 \text{ mL} = 17 \text{ kL } 97 \text{ L } 820 \text{ mL}$.

kL	L	mL
	1	1 1
2 5	0 0 7	0 6 5
+ 0 0	0 1 8	4 5 6
<hr/>	0 2 5	5 2 1

Thus, $25 \text{ kL } 7 \text{ L } 65 \text{ mL} + 18 \text{ L } 456 \text{ mL} = 25 \text{ kL } 25 \text{ L } 521 \text{ mL}$.

L	mL
8 10	
✓ ✓	7 7 0
- 1 9	7 5 0
<hr/>	0 2 0

Thus, $90 \text{ L } 770 \text{ mL} - 19 \text{ L } 750 \text{ mL} = 71 \text{ L } 20 \text{ mL}$.

kL	L
2 10	3 10
✓ ✓	0 ✓ ✓
- 2 6	0 2 8
<hr/>	0 1 2

Thus, $30 \text{ kL } 40 \text{ L} - 26 \text{ kL } 28 \text{ L} = 4 \text{ kL } 12 \text{ L}$.

kL	L	mL
14	9	
2 4	✓ 12	
✓ ✓	✓ ✓ 6	4 7 0
- 1 7	4 5 0	1 4 0
<hr/>	5 7 6	3 3 0

Thus, $35 \text{ kL } 26 \text{ L } 470 \text{ mL} - 17 \text{ kL } 450 \text{ L } 140 \text{ mL} = 17 \text{ kL } 576 \text{ L } 330 \text{ mL}$.

kL	L	mL
	9 9	
6	✓ 10 10	
1 ✓	✓ ✓ 0	3 7 8
- 0 0	0 1 9	3 0 0
<hr/>	9 8 1	0 7 8

Thus, $17 \text{ kL } 378 \text{ mL} - 19 \text{ L } 300 \text{ mL} = 16 \text{ kL } 981 \text{ L } 78 \text{ mL}$.

L	mL
2 1	2
6 8	8 5 0
9 8	7 6 0
8 4	0 9 0
2 5 1	7 0 0

Thus, total sale of milk in 3 days is $251 \text{ L } 700 \text{ mL}$.

kL	L
11	9
0 10	✓ ✓ 0
✓ ✓	✓ ✓ 0
- 0 4	9 5 0
<hr/>	0 7 0

Water carried by the tanker = $7 \text{ kL } 50 \text{ L}$ water is received in colony B.

L	mL
8 10	
✓ ✓	7 7 0
- 1 9	7 5 0
<hr/>	0 2 0

Thus, $90 \text{ L } 770 \text{ mL} - 19 \text{ L } 750 \text{ mL} = 71 \text{ L } 20 \text{ mL}$.

Mental Maths (Page 191)

1. $2 \text{ m} = 2000 \text{ mm}$
 $(\because 2 \text{ m} = 200 \text{ cm} = (200 \times 10) \text{ mm} = 2000 \text{ mm})$

2. $2000 \text{ mL} = 2 \text{ L}$ $(\because (2000 \div 1000) \text{ L} = 2 \text{ L})$

3. 1 gram = 100 centigram.

km	m
9	
0 10	10
✓ ✓	✓ 0 0
- 0 3	5 0 0
<hr/>	5 0 0

On subtracting $3 \text{ km } 500 \text{ m}$ from 10 km , we get $6 \text{ km } 500 \text{ m}$.

L	mL
0 10	5 0 0
✓ Ø	
- 0 8	0 0 0
0 2	5 0 0

So, when 8 L of juice is distributed out of 10 L 500 mL of juice, the quantity of juice left is 2 L 500 mL.

$$\text{We have } 1 \text{ L} = 1000 \text{ mL} \quad \therefore 2 \text{ L} = 2000 \text{ mL} \\ \therefore 2 \text{ L } 500 \text{ mL} = 2000 \text{ mL} + 500 \text{ mL} = 2500 \text{ mL}$$

Chapter Assessment

1. (a) – (iii) $3 \text{ L } 50 \text{ mL} = 3050 \text{ mL} \neq 3500 \text{ mL}$

Hence, statement is wrong.

(b) – (i) $12 \text{ km } 55 \text{ m} = (12 \times 1000) \text{ m} + 55 \text{ m} \\ = 12000 \text{ m} + 55 \text{ m} = 12055 \text{ m}$

(c) – (iii) $5 \text{ kg} - (500 \text{ g} + 200 \text{ g} + 50 \text{ g}) \\ = 5000 \text{ g} - 750 \text{ g} = 4250 \text{ g} = 4 \text{ kg } 250 \text{ g}$

(d) – (ii)

kg	g
1	1

Weight of vegetables = 2 2 5 0

Weight of pulses = 1 0 0 0

Weight of sugar = + 3 7 5 0

Total weight of the items = 7 0 0 0

(e) (iv) A bottle contains 1 L of water

1 L = 1000 mL

She drank $\frac{3}{4}$ L of water

i.e., $\frac{3}{4} \times 1000 = 750 \text{ mL}$

Her friend drank 150 mL of water

∴ Water left in the bottle

$$= 1000 \text{ mL} - 750 \text{ mL} - 150 \text{ mL} \\ = 250 \text{ mL} - 150 \text{ mL} = 100 \text{ mL}$$

2. (a) 5 tons = 50 quintals = 5000 kg

(∴ 1 ton = 10 quintals and 1 quintal = 100 kg)

∴ 5 tons = 5×10 quintals

$$= 50 \text{ quintals and } 50 \text{ quintals} \\ = 50 \times 100 \text{ kg} = 5000 \text{ kg}$$

(b) 41 quintals = 4100 kg = 4100000 g

(∴ 1 quintal = 100 kg and 1 kg = 1000 g)

∴ 41 quintals = $41 \times 100 \text{ kg} = 4100 \text{ kg}$

and $4100 \times 1000 \text{ g} = 4100000 \text{ g}$

(c) 11 tons = 11000 kg = 11000000 g

(∴ 1 ton = 1000 kg and 1 kg = 1000 g)

∴ 11 tons = $11 \times 1000 \text{ kg} = 11000 \text{ kg}$

and $11000 \times 1000 \text{ g} = 11000000 \text{ g}$

(d) 13 ft 9 in = 165 in

$$(\because 1 \text{ ft} = 12 \text{ in} \therefore 13 \text{ ft} = 13 \times 12 \\ = 156 \text{ in} + 9 \text{ in} = 165 \text{ in})$$

(e) 18 in = 1 ft 6 in

$$\therefore 18 \text{ in} \div 12 = 1 \text{ ft } 6 \text{ in} \\ \begin{array}{r} 18 \\ 12 \overline{)18} \\ \underline{-12} \\ 6 \end{array}$$

3. (a) Metre is the greatest unit of measurement.

False

(b) $500 \text{ g} + 500 \text{ g} = 1 \text{ kg}$.

True

(c) Half of a kilometre is 50 m.

False

(d) $10500 \text{ mL} = 10 \text{ L } 500 \text{ mL}$.

True

(e) 10 decametres = 1 metre.

False

4. 50 mL of milk is used to make a cup of tea.

Milk required to make 24 cups of tea = $50 \times 24 \\ = 1200 \text{ mL}$ or 1 L 200 mL

5.

m	cm
1 5	9 5
1 1	7 5

Length of cloth left with Maya = 0 4 2 0

Thus, 4 m 20 cm cloth is left with her.

6.

L	mL
3 6	7 5 6
5	3 6 4

Less juice sold by neighboring shop = –

Juice sold by neighboring shop everyday = 3 1 3 9 2

Thus, the neighboring juice shop sells 31 L 392 mL juice everyday.

7.

kg	g
3 4 5	2 3 4
1 9 9	5 6 4
1 4 5	6 7 0

Weight of wheat = 3 4 5 2 3 4

Weight of wheat distributed = – 1 9 9 5 6 4

Weight of wheat left = 1 4 5 6 7 0

Thus, 145 kg 670 g wheat is left.

8. Weight of Anaya = 64 kg 430 g

Weight of Rohan = 12 kg 65 g + 64 kg 430 g

∴ Weight of Rohan =

kg	g
6 4	4 3 0
+ 1 2	6 5
7 6	4 9 5

Thus, Rohan's weight is 76 kg 496 g.

Detailed Solutions

9. Weight of box with apples = 270 kg 500 g
 Weight of box with oranges = 192 kg 500 g
 Weight of box with guavas = 245 kg
 Total weight of the fruits together = 690 kg
 ∴ Weight of the box alone = (Weight of box with apples + weight of the box with oranges + weight of the box with guavas – Total weight of fruits together) \div 3 (∴ The weight of the box is included in the weight of the fruits)
 ∴ Weight of the box alone = $(270 \text{ kg } 500 \text{ g} + 192 \text{ kg } 500 \text{ g} + 245 \text{ kg} - 690 \text{ kg}) \div 3$
 $= (708 - 690 \text{ kg}) \div 3 = 18 \text{ kg} \div 3 = 6 \text{ kg}$
 Thus, the weight of box alone is 6 kg.

10. (a) $8586 \text{ m} = 8000 \text{ m} + 586 \text{ m} = 8 \text{ km } 586 \text{ m}$
 (b) $7816 \text{ m} = 7000 \text{ m} + 816 \text{ m} = 7 \text{ km } 816 \text{ m}$
 (c) $7716 \text{ m} = 7000 \text{ m} + 716 \text{ m} = 7 \text{ km } 716 \text{ m}$
 (d) $7242 \text{ m} = 7000 \text{ m} + 242 \text{ m} = 7 \text{ km } 242 \text{ m}$
 (e) $6992 \text{ m} = 6000 \text{ m} + 992 \text{ m} = 6 \text{ km } 992 \text{ m}$

Brain Sizzlers (Page 193)

$$\begin{aligned}\text{Anaya's height} &= 1720 \text{ mm} = 1720 \div 10 \text{ cm} \\ &= 172 \text{ cm} \\ \text{Siya's height} &= 3 \text{ m } 40 \text{ cm} - 172 \text{ cm} \\ &= 340 \text{ cm} - 172 \text{ cm} = 168 \text{ cm} \\ \text{Rehan's height} &= 168 \text{ cm} + 2 \text{ cm } 4 \text{ mm} \\ &= 170 \text{ cm } 4 \text{ mm} \\ \text{Maya's height} &= 170 \text{ cm } 4 \text{ mm} + 4 \text{ cm } 2 \text{ mm} \\ &= 174 \text{ cm } 6 \text{ mm}\end{aligned}$$

Ascending order: $168 \text{ cm} < 170 \text{ cm } 4 \text{ mm} < 172 \text{ cm} < 174 \text{ cm } 6 \text{ mm}$

CHAPTER 11: PERIMETER AND AREA

Practice Time 11A

1. (a) Perimeter of figure (a)
 $= 6 \text{ units} + 7 \text{ units} + 6 \text{ units} + 7 \text{ units} = 26 \text{ units.}$

(b) Perimeter of figure (b)
 $= 2 \text{ units} + 2 \text{ units} + 4 \text{ units} + 6 \text{ units} + 6 \text{ units} + 8 \text{ units} = 28 \text{ units.}$

(c) Perimeter of figure (c)
 $= 4 \text{ units} + 1 \text{ unit} + 1 \text{ unit} + 6 \text{ units} + 1 \text{ unit} + 1 \text{ unit} + 4 \text{ units} + 1 \text{ unit} + 1 \text{ unit} + 6 \text{ units} + 1 \text{ unit} + 1 \text{ unit} = 28 \text{ units.}$

(d) Perimeter of figure (d)
 $= 6 \text{ units} + 3 \text{ units} + 2 \text{ units} + 4 \text{ units} + 2 \text{ units} + 4 \text{ units} + 2 \text{ units} + 3 \text{ units} = 26 \text{ units.}$

(e) Perimeter of figure (e)
 $= 1 \text{ unit} + 2 \text{ units} + 3 \text{ units} + 6 \text{ units} + 3 \text{ units} + 2 \text{ units} + 4 \text{ units} = 28 \text{ units.}$

(f) Perimeter of figure (f)
 $= 2 \text{ units} + 2 \text{ units} = 24 \text{ units.}$

2. (a) Perimeter of the given figure
 $= \text{Sum of the lengths of its sides}$
 $= 5 \text{ cm} + 6 \text{ cm} + 8 \text{ cm} = 19 \text{ cm.}$

(b) Perimeter of the given figure
 $= \text{Sum of the lengths of its sides}$
 $= 8 \text{ cm} + 5 \text{ cm} + 8 \text{ cm} + 5 \text{ cm} = 26 \text{ cm.}$

(c) Perimeter of the given figure
 $= \text{Sum of the lengths of its sides}$
 $= 4 \text{ cm} + 4 \text{ cm} + 4 \text{ cm} + 4 \text{ cm} = 16 \text{ cm.}$

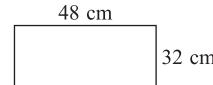
(d) Perimeter of the given figure
 $= \text{Sum of the lengths of its sides}$
 $= 9 \text{ cm} + 7 \text{ cm} + 10 \text{ cm} + 5 \text{ cm} = 31 \text{ cm.}$

(e) Perimeter of the given figure
 $= \text{Sum of the lengths of its sides}$
 $= 5 \text{ cm} + 3 \text{ cm} + 3 \text{ cm} + 5 \text{ cm} + 4 \text{ cm}$
 $= 20 \text{ cm.}$

(f) Perimeter of the given figure
 $= \text{Sum of the lengths of its sides.}$
 $= 6 \text{ cm} + 3 \text{ cm} + 5 \text{ cm} + 4 \text{ cm} + 3 \text{ cm} + 4 \text{ cm.}$
 $= 25 \text{ cm.}$

3. Length of each side = 4 cm
 Number of equal sides = 6
 $\text{Perimeter} = 4 \times 6 = 24 \text{ cm.}$

4. Length of two equal sides of a triangle = 15 cm.
 Length of 3rd side = 18 cm.
 $\text{Perimeter of triangle} = \text{Sum of lengths of its sides.}$
 $15 \text{ cm} + 15 \text{ cm} + 18 \text{ cm} = 48 \text{ cm.}$

5. Length of a rectangle (l) = 48 cm. 
 Breadth of a rectangle (b) = 32 cm.
 We know that, perimeter of a rectangle = $2(l + b)$
 $= 2(48 + 32) \text{ cm} = 2 \times 80 \text{ cm} = 160 \text{ cm.}$
 Thus, the perimeter of the rectangle is 160 cm.

6. Length of each side of the square = 7 cm.
 We know that, perimeter of the square
 $= 4 \times \text{side} = 4 \times 7 \text{ cm} = 28 \text{ cm.}$
 Thus, the perimeter of the square is 28 cm.

Practice Time 11B

- Number of unit squares in the figure (A) = 12
Therefore, area of the figure (A) = 12 sq. cm
Number of unit squares in the figure (B) = 4
Therefore, area of the figure (B) = 4 sq. cm
Number of unit squares in the figure (C) = 6
Therefore, area of the figure (C) = 6 sq. cm
Number of unit squares in the figure (D) = 16
Therefore, area of the figure (D) = 16 sq. cm
Number of unit squares in the figure (E) = 16
Therefore, area of the figure (E) = 16 sq. cm
Number of unit squares in the figure (F) = 15
Therefore, area of the figure (F) = 15 sq. cm
Number of unit squares in the figure (G) = 10
Therefore, area of the figure (G) = 10 sq. cm
- (a) Number of squares = 5
So, the area of square is 5 sq. units.
- (b) Here, number of complete squares = 4
Number of half squares = 8
Since, 2 half squares make 1 complete square.
Thus, the area of the figure = $4 + 8 = 12$ sq. units.
- (c) Here, number of complete squares = 2
Number of half squares = 4
Since, 2 half squares make 1 complete square.
Thus, the area of the figure = $2 + 4 = 6$ sq. units.
- (d) Here, number of complete squares = 3
Number of half squares = 6
Since, 2 half squares make 1 complete square.
Thus, the area of the figure = $3 + 6 = 9$ sq. units.
- (e) Here, number of complete squares = 9
Number of half squares = 8
Since, 2 half square make 1 complete square.
Thus, the area of the figure = $9 + 8 = 17$ sq. units.
- (f) Here, number of complete squares = 5
Number of half squares = 4
Since, 2 half square make 1 complete square.
Thus, the area of the figure = $5 + 4 = 9$ sq. units.

Chapter Assessment

- (a) (iii) Length of rectangle (l) = 13 cm
Breadth of rectangle (b) = 5 cm
Perimeter of rectangle = $2(l + b)$
= $2(13 + 5)$ cm

$$\begin{aligned}\text{Perimeter of rectangle} &= 2 \times 18 \text{ cm} \\ &= 36 \text{ cm}\end{aligned}$$

- (iii) Length of rectangular garden (l) = 135 m
Breadth of rectangular garden (b) = 87 m
Perimeter of rectangular garden

$$\begin{aligned}&= 2(l + b) \\ &= 2(135 + 87) \text{ cm} \\ &= 2 \times 222 \text{ cm} = 444 \text{ cm}\end{aligned}$$

- (i) Side of a square = 7 cm
Perimeter of square = $4 \times$ side
= 4×7 cm
= 28 cm

- (ii) Length of 1st side = 15 m
Length of 2nd side = 16 m
Perimeter of triangle = 47 m
Perimeter of triangle = Sum of its three sides

$$47 \text{ m} = 15 \text{ m} + 16 \text{ m} + \text{third side}$$

$$47 \text{ m} = 31 \text{ m} + \text{third side}$$

$$\text{Third side} = 47 \text{ m} - 31 \text{ m} = 16 \text{ m}$$

- (i) Number of complete squares = 12 m
So, the area of square = 12 sq. units

- (a) Perimeter of the given figure
= Sum of lengths of its sides.
5 cm + 7 cm + 8 cm = 20 cm

- (b) Perimeter of the given figure
= Sum of lengths of its sides.
6 cm + 6 cm + 6 cm = 18 cm

- (c) Perimeter of the given figure
= Sum of lengths of its sides.
9 cm + 9 cm + 7 cm = 25 cm

- (d) Perimeter of the rectangle
= $2 \times (l + b) = 2 \times (10 + 2) = 2 \times 12 = 24$ cm

- (e) Perimeter of the square
= $4 \times$ side = $4 \times 4 = 16$ cm

- (f) Perimeter of the given figure
= Sum of lengths of its sides.
5 cm + 5 cm + 5 cm + 5 cm = 20 cm

- (a) Perimeter of given figure
= $2 \text{ cm} + 4 \text{ cm} + 2 \text{ cm} + 4 \text{ cm} = 12 \text{ cm}.$
Number of squares = 8.
So, the area of squares is 8 sq. cm.
 $\therefore P = 12 \text{ cm}$ and $A = 8 \text{ sq. cm.}$

Detailed Solutions

(b) Perimeter of given figure

$$\begin{aligned} &= 4 \text{ cm} + 4 \text{ cm} + 4 \text{ cm} + 4 \text{ cm} \\ &= 16 \text{ cm.} \end{aligned}$$

Number of squares = 16.

So, the area of squares is 16 sq. cm.

$$\therefore P = 16 \text{ cm, } A = 16 \text{ sq. cm.}$$

(c) Perimeter of the given figure

$$\begin{aligned} &= 3 \text{ cm} + 3 \text{ cm} + 1 \text{ cm} + 1 \text{ cm} + 1 \text{ cm} + 1 \text{ cm} \\ &+ 1 \text{ cm} + 1 \text{ cm} = 12 \text{ cm} \end{aligned}$$

Number of squares = 6

So, the area of square is 6 sq. cm

$$\therefore P = 12 \text{ cm, } A = 6 \text{ sq. cm.}$$

(d) Perimeter of the given figure

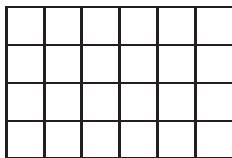
$$\begin{aligned} &= 2 \text{ cm} + 1 \text{ cm} + 1 \text{ cm} + 1 \text{ cm} + 1 \text{ cm} + 2 \text{ cm} \\ &+ 2 \text{ cm} + 4 \text{ cm} = 14 \text{ cm} \end{aligned}$$

Number of squares = 9

So, the area of square is 9 sq. cm

$$\therefore P = 14 \text{ cm, } A = 9 \text{ sq. cm.}$$

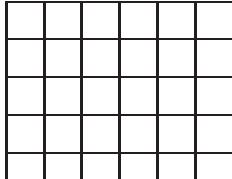
4. (a)



Number of squares = 24

So, the area of square is 24 sq. cm

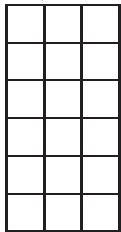
(b)



Number of squares = 30

So, the area of square is 30 sq. cm

(c)



Number of squares = 18

So, the area of square is 18 sq. cm

5. (a) Here, number of complete squares = 8

Number of half squares = 20

Since, 2 half squares make 1 complete square.

Thus, the area of the figure = $8 + 10 = 18$ sq. cm

(b) Here, number of complete squares = 5

Number of half squares = 20

Since, 2 half squares make 1 complete square.

Thus, the area of the figure = $5 + 10 = 15$ sq. cm

6. Length of each road is 250 m.

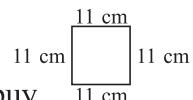
Perimeter of the given figure

$$= 250 \text{ m} + 250 \text{ m} + 250 \text{ m} = 750 \text{ m.}$$

Thus, the required length of the fence is 750 m

7. Side of squared shape

handkerchief = 11 cm



Length of the lace Riya needs to buy

$$= 11 \text{ cm} + 11 \text{ cm} + 11 \text{ cm} + 11 \text{ cm} = 44 \text{ cm.}$$

8. Length of rectangular plot = 12 m

Breadth of rectangular plot = 10 m

Perimeter of rectangular plot = $2(12 + 10)$ m

$$= 2 \times 22 \text{ m} = 44 \text{ m}$$

Required length of the fence

$$= 44 \times 2 = 88 \text{ m.}$$

9. Perimeter of given square = 32 cm

or Perimeter of a square = $4 \times$ side

$$\therefore 32 \text{ cm} = 4 \times \text{side} \quad \text{or} \quad \text{side} = \frac{32}{4} = 8 \text{ cm}$$

On cutting a square into two halves, i.e., $= \frac{8}{2} = 4$ cm,

we get, breadth = 4 cm and length = 8 cm

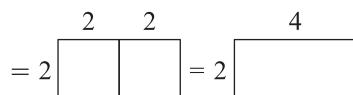
Therefore, perimeter of one rectangle = sum of its four sides = $4 \text{ cm} + 4 \text{ cm} + 8 \text{ cm} + 8 \text{ cm} = 24 \text{ cm.}$

Brain Sizzlers (Page 206)

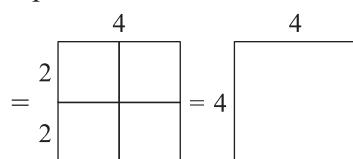
Solve this in reverse order.

Given, final square is of one side = 2 cm

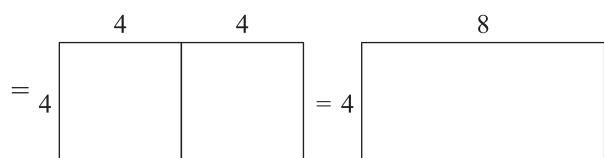
Step 1. On unfolding, the next rectangle



Step 2. On unfolding, the length and width of square



Step 3. At left width on unfold, the length and width of rectangle



So, area of piece of paper = $4 \times 8 = 32$ sq. cm

CHAPTER 12 : TIME

Let's Recall

1. (a) $2 \text{ hours} = 120 \text{ minutes}$

(b) $1 \text{ day} = 24 \text{ hours}$

(c) $20 \text{ weeks} = 140 \text{ days}$

(d) $3 \text{ years} = 1095 \text{ days}$

2. (a) - (iii) (b) - (ii)

(c) - (iv) (d) - (i)

Practice Time 12A

- (b) 12:13, 13 minutes past 12, 47 minutes to 1
- (c) 5:30, 30 minutes past 5, 30 minutes to 6
- (d) 2:40, 40 minutes past 2, 20 minutes to 3
- (e) 7:16, 16 minutes past 7, 44 minutes to 8
- (f) 9:15, 15 minutes past 9, 45 minutes to 10
- (g) 6:45, 45 minutes past 6, 15 minutes to 7
- (h) 11:10, 10 minutes past 11, 50 minutes to 12

2. Do it yourself.

Practice Time 12B

1. $50 \text{ seconds} \rightarrow 10 \text{ seconds} \rightarrow 25 \text{ seconds}$

Practice Time 12C

1. (a) 03:34 hours (b) 16:50 hours

(c) 19:30 hours (d) 10:00 hours

(e) 00:00 hours or 24:00 hours

(f) 18:34 hours

2. (a) 4:20 p.m. (b) 6:57 p.m.

(c) 8:20 p.m. (d) 4:30 a.m.

(e) 10:00 p.m. (f) 8:08 a.m.

3. (a) Renu wakes up at 06:45 a.m.

(b) A bus leaves ISBT at 2:45 p.m.

(c) A hawker starts distributing newspapers at 05:35 a.m.

(d) A match starts at 5:30 p.m.

(e) Golu reached Agra at 8:10 p.m.

4. To write the 12-hour clock format, that is, p.m. time into 24-hour clock format, we just remove ‘:’ sign and write the time add to 12 without p.m.

So, we read and write 4:30 p.m. in the 12-hour clock format and 16:30 hours or 1630 hours in the 24-hour clock format.

Practice Time 12D

1. (a) Since, $1 \text{ hour} = 60 \text{ minutes}$
So, $6 \text{ hours} = 6 \times 60 \text{ minutes}$
 $= 360 \text{ minutes}$

(b) Since, $1 \text{ hour} = 60 \text{ minutes}$
So, $8 \text{ hours} = 8 \times 60 \text{ minutes}$
 $= 480 \text{ minutes}$

So, 8 hours 30 minutes
 $= 480 \text{ minutes} + 30 \text{ minutes}$
 $= 510 \text{ minutes.}$

(c) Since, $1 \text{ hour} = 60 \text{ minutes}$
and $1 \text{ minute} = 60 \text{ seconds}$
So, $1 \text{ hours} = 60 \times 60 \text{ seconds}$
 $= 3600 \text{ seconds}$
So, $5 \text{ hours} = 5 \times 3600 \text{ seconds}$
 $= 18000 \text{ seconds.}$

(d) Since, $1 \text{ minute} = 60 \text{ seconds}$
So, $18 \text{ minutes} = 18 \times 60 \text{ seconds}$
 $= 1080 \text{ seconds}$

(e) Since, $1 \text{ minute} = 60 \text{ seconds}$
So, $28 \text{ minutes} = 28 \times 60 \text{ seconds}$
 $= 1680 \text{ seconds}$

So, 28 minutes 15 seconds
 $= 1680 \text{ seconds} + 15 \text{ seconds}$
 $= 1695 \text{ seconds}$

(f) Since, $1 \text{ hour} = 60 \text{ minutes}$,
 $1 \text{ minute} = 60 \text{ seconds}$
So, $1 \text{ hour} = 60 \times 60 \text{ seconds}$
 $= 3600 \text{ seconds}$
So, $14 \text{ hours} = 14 \times 3600 \text{ seconds}$
 $= 50400 \text{ seconds}$
and $1 \text{ minute} = 60 \text{ seconds}$
So, $48 \text{ minutes} = 48 \times 60 \text{ seconds}$
 $= 2880 \text{ seconds}$

Therefore, 14 hours 48 minutes
 $= 50400 \text{ seconds} + 2880 \text{ seconds}$
 $= 53280 \text{ seconds}$

2. (a) Since, $60 \text{ seconds} = 1 \text{ minute}$

So, 216 seconds

$= (216 \div 60) \text{ minutes} \quad \begin{array}{r} 60 \\ \overline{)216} \\ 216 \end{array}$ (30 \rightarrow minutes)

Thus, 216 seconds $= 3 \quad \begin{array}{r} 180 \\ \overline{)216} \\ 216 \end{array}$ (36 \rightarrow seconds)

minutes 36 seconds.

Detailed Solutions

(b) Since, 60 seconds = 1 minute

$$\begin{array}{r} \text{So, 2448 seconds} \\ = (2448 \div 60) \text{ minutes} \\ \hline \text{Thus, 2448 seconds} \\ = 40 \text{ minutes 48 seconds.} \end{array}$$

(c) Since, 3860 seconds

$$\begin{array}{r} 60 \overline{)3860} (40 \rightarrow \text{minutes} \\ = (3860 \div 60) \text{ minutes} \\ = 64 \text{ minutes 20 seconds} \\ \text{Further, 64 minutes} \\ = (64 \div 60) \text{ hours} \\ = 1 \text{ hour 4 minutes.} \\ \text{Thus, 3860 seconds} \\ = 1 \text{ hour 4 minutes 20 seconds} \end{array}$$

(d) Since, 60 minutes = 1 hour

$$\begin{array}{r} \text{So, 120 minutes} \\ = (120 \div 60) \text{ hours} \\ = 2 \text{ hours} \end{array}$$

Practice Time 12E

1. (a) Write the time in the columns and then add by following the given steps.

Step 1. Add the seconds.

$$\begin{array}{r} \text{38 seconds} + 17 \text{ seconds} \\ = 55 \text{ seconds} \\ \hline \text{Step 2. Add the minutes.} \\ 1 \text{ minute} + 35 \text{ minutes} + 18 \text{ minutes} = 53 \text{ minutes} \end{array}$$

Thus, the sum is 53 minutes 55 seconds

$$\begin{array}{r} \text{min} \quad \text{s} \\ \begin{array}{r} 2 \ 4 \\ + 0 \ 5 \\ \hline 2 \ 9 \end{array} \quad \begin{array}{r} 1 \ 8 \\ 2 \ 0 \\ \hline 3 \ 8 \end{array} \end{array}$$

Thus, 24 minutes 18 seconds + 5 minutes 20 seconds = 29 minutes 38 seconds.

$$\begin{array}{r} \text{min} \quad \text{s} \\ \begin{array}{r} 1 \\ 2 \ 8 \\ + 2 \ 9 \\ \hline 5 \ 7 \end{array} \quad \begin{array}{r} 3 \ 8 \\ 4 \ 0 \\ \hline 7 \ 8 \end{array} \end{array}$$

Thus, 27 minutes 38 seconds + 29 minutes 40 seconds = 57 minutes 78 seconds, i.e., 58 minutes 18 seconds.

$$\begin{array}{r} \text{min} \quad \text{s} \\ \begin{array}{r} 1 \ 5 \\ + 3 \ 0 \\ \hline 4 \ 5 \end{array} \quad \begin{array}{r} 3 \ 0 \\ 3 \ 5 \\ \hline 6 \ 5 \end{array} \end{array}$$

Thus, 15 minutes 30 seconds + 30 minutes 35 seconds = 45 minutes 65 seconds, i.e., 46 minutes 5 seconds.

(e) Write the time in the columns and then add by following the given steps.

Step 1. Add the seconds.

$$10 \text{ seconds} + 20 \text{ seconds} = 30 \text{ seconds}$$

Step 2. Add the minutes.

$$35 \text{ minutes} + 16 \text{ minutes} = 51 \text{ minutes}$$

Step 3. Add the hours.

$$16 \text{ hours} + 25 \text{ hours} = 41 \text{ hours}$$

$$\begin{array}{r} \text{h} \quad \text{min} \quad \text{s} \\ \begin{array}{r} 1 \\ 1 \ 6 \\ + 2 \ 5 \\ \hline 4 \ 1 \end{array} \quad \begin{array}{r} 1 \\ 3 \ 5 \\ 1 \ 6 \\ \hline 5 \ 1 \end{array} \quad \begin{array}{r} 1 \ 0 \\ 2 \ 0 \\ 3 \ 0 \\ \hline \end{array} \end{array}$$

Thus, the sum is 41 hours 51 minutes 30 seconds or 1 day 17 hours 51 minutes 30 seconds.

$$\begin{array}{r} \text{h} \quad \text{min} \quad \text{s} \\ \begin{array}{r} 1 \\ 1 \ 0 \ 0 \\ + 0 \ 0 \ 5 \\ \hline 1 \ 0 \ 5 \end{array} \quad \begin{array}{r} 1 \\ 4 \ 5 \\ 1 \ 9 \\ \hline 6 \ 4 \end{array} \quad \begin{array}{r} 1 \ 2 \\ 5 \ 6 \\ 1 \ 2 \\ \hline 6 \ 8 \end{array} \end{array}$$

Thus, 100 hours 45 minutes 56 seconds + 5 hours 19 minutes 12 seconds

$$= 105 \text{ hours } 64 \text{ minutes } 68 \text{ seconds}$$

$$= 106 \text{ hours } 5 \text{ minutes } 8 \text{ seconds}$$

or 4 days 10 hours 5 minutes 8 seconds

$$\begin{array}{r} \text{h} \quad \text{min} \\ \begin{array}{r} 2 \ 5 \\ - 1 \ 0 \\ \hline 1 \ 5 \end{array} \quad \begin{array}{r} 2 \ 4 \\ 0 \ 9 \\ \hline 1 \ 5 \end{array} \end{array}$$

Thus, 25 hours 24 minutes - 10 hours 9 minutes = 15 hours 15 minutes.

(b) Write the time in the vertical columns and then subtract by following the given steps.

Step 1. Subtract the minutes.

Since, 38 minutes < 40 minutes.

So, regroup minutes and hours.

That is, borrow 1 hour = 60 minutes to minutes

So, 24 hours 38 minutes

$$= 23 \text{ hours } 60 \text{ minutes} + 38 \text{ minutes}$$

$$= 23 \text{ hours } 98 \text{ minutes.}$$

Now, 98 minutes - 40 minutes = 58 minutes.

Step 2. Subtract the hours.

$$23 \text{ hours} - 9 \text{ hours} = 14 \text{ hours}$$

h	min
23	98
24	38
-	
09	40
14	58

Thus, the difference is equal to 14 hours 58 minutes.

(c)

min	s
9	66
10	06
-	
05	26
4	40

Thus, 10 minutes 40 seconds – 5 minutes 26 seconds = 4 minutes 40 seconds.

(d)

h	min	s
	99	
23	29	70
24	40	10
-	04	56
19	43	54

Thus, 24 minutes 40 minutes 10 seconds – 4 hours 56 minutes 16 seconds = 19 hours 43 minutes 54 seconds.

3. Time taken by Ram to travel by one bus

$$= 15 \text{ hours } 20 \text{ minutes}$$

Time taken by him in travelling by another bus

$$= 13 \text{ hours } 54 \text{ minutes}$$

Time taken by him in travelling by both the buses

$$= 15 \text{ hours } 20 \text{ minutes} +$$

$$13 \text{ hours } 54 \text{ minutes}$$

$$= 28 \text{ hours } 74 \text{ minutes}$$

$$= 29 \text{ hours } 14 \text{ minutes or } 1 \text{ day}$$

$$5 \text{ hours } 14 \text{ minutes}$$

h	min
1	5
1	3
2	8

h	min
2	0
5	4
2	7

4.

min	s
42	12

$$\text{Time taken in making lunch} =$$

$$\text{Time taken in making dinner} =$$

$$\text{Total time spent on cooking} =$$

Thus, 95 minutes 40 seconds or 1 hour 35 minutes 40 seconds is spent on cooking.

5. Time taken by Ajay in completing his homework

$$= 1 \text{ hour } 10 \text{ minutes } 20 \text{ seconds}$$

Time taken by Putul in completing her homework
= 55 minutes 20 seconds

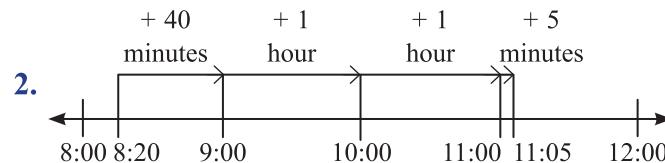
Difference between time taken in completing the homework

h	min	s
0	70	
1	10	20
-	0	55
0	15	0

Thus, Ajay takes 15 more minutes to complete his homework.

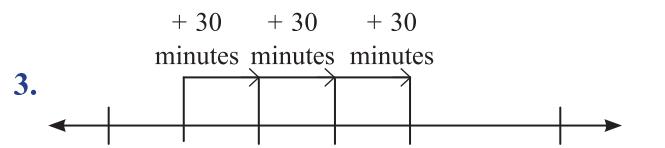
Practice Time 12F

1.	Starting time	Finishing time	Duration
(a)	7:25 a.m.	9:15 a.m.	1 hour 50 minutes
(b)	11:10 p.m.	12:20 a.m.	1 hour 10 minutes
(c)	5:45 a.m.	6:35 a.m.	50 minutes
(d)	8:10 p.m.	11:35 p.m.	3 hours 25 minutes
(e)	10:55 a.m.	12:16 p.m.	1 hour 21 minutes



Starting time	Reaching time	Duration
8:20 a.m.	11:05 a.m.	2 hours 45 minutes

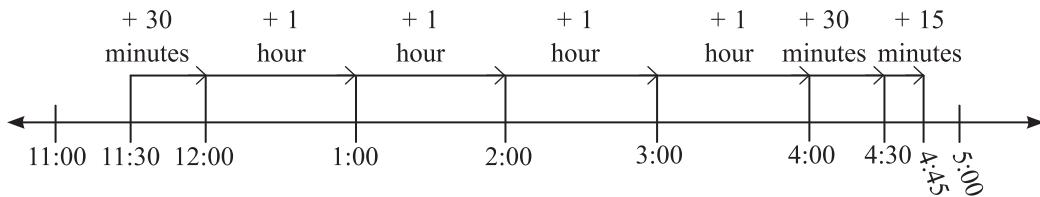
Thus, the aeroplane took 2 hours 45 minutes to reach Delhi from Chennai.



Starting time	Finishing time	Duration
11:30 a.m.	1:00 p.m.	1 hours 30 minutes

Thus, the match was played 1 hour 30 minutes.

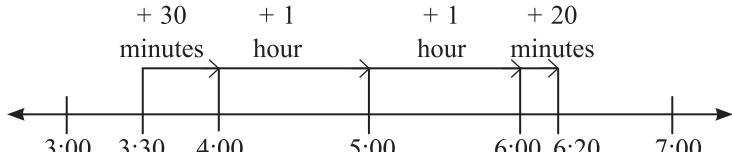
4.



Starting time	Finishing time	Duration
11:30 a.m.	4:45 p.m.	5 hours 15 minutes

Thus, 5 hours 15 minutes was the duration of the event.

5.



Starting time	Duration	Finishing time
3:30 a.m.	2 h 50 min	6:20 a.m.

Thus, 6:20 p.m. she finishes her project.

Quick Check (Page 222)

- April is the 4th month of the year.
- A leap year has 366 days.
- September has 30 days.
- January, March, May, July, August, October and December months have 31 days.

Practice Time 12G

- 4 May is the first Sunday of May.
- 17 February is the 3rd Monday in February.
- 30 July is last Wednesday in July.
- Saturday is the last day of the third week after May 3.
- Saturday is the day after 5 days of December 7.
- Monday is the day before one week of June 16.

- Since, 7 days = 1 week

$$\begin{array}{r} 7 \overline{) 42} (6 \rightarrow \text{Weeks} \\ - 42 \\ \hline 0 \rightarrow \text{day} \end{array}$$

So, 42 days = $(42 \div 7)$ weeks = 6 weeks.

Thus, 42 days = 6 weeks.

- Since, 7 days = 1 week

$$\begin{array}{r} 7 \overline{) 105} (15 \rightarrow \text{Weeks} \\ - 7 \\ \hline 35 \\ - 35 \\ \hline 0 \rightarrow \text{day} \end{array}$$

So, 105 days = $(105 \div 7)$ weeks = 15 weeks.

- Since, 12 months = 1 year.
So, 144 months = $(144 \div 12)$ years.
= 12 years.

Thus, 144 months = 12 years.

- Since, 12 months = 1 year.

$$\begin{aligned} \text{So, } 72 \text{ months} &= (72 \div 12) \text{ years.} \\ &= 6 \text{ years.} \end{aligned}$$

Thus, 72 months = 6 years.

- Since, 4 weeks = 1 month

$$\begin{aligned} \text{So, } 12 \text{ weeks} &= (12 \div 4) \text{ months.} \\ &= 3 \text{ months.} \end{aligned}$$

Thus, 12 weeks = 3 months.

- Since, 365 days = 1 year

$$\begin{aligned} \text{So, } 730 \text{ days} &= (730 \div 365) \text{ years.} \\ &= 2 \text{ years.} \end{aligned}$$

Thus, 730 days = 2 years.

- Since, 1 month = 30 days.

$$\begin{aligned} \text{So, } 3 \text{ months } 7 \text{ days} &= 3 \times 30 + 7 \text{ days} \\ &= 90 \times 7 \text{ days} = 97 \text{ days.} \end{aligned}$$

Thus, 3 months 7 days = 97 days

- 4 months 23 days = $4 \times 30 + 23$ days.

$$= 120 + 23 \text{ days} = 143 \text{ days.}$$

- Since, 1 week = 7 days.

$$\begin{aligned} \text{So, } 7 \text{ weeks } 5 \text{ days} &= 7 \times 7 + 5 \text{ days.} \\ &= 49 + 5 \text{ days} = 54 \text{ days.} \end{aligned}$$

- 9 weeks 4 days = $9 \times 7 + 4$ days.

$$= 63 + 4 \text{ days} = 67 \text{ days.}$$

- 2 weeks 1 days = $2 \times 7 + 1$ days.

$$= 14 + 1 \text{ days} = 15 \text{ days.}$$

- 7 months 20 days = $7 \times 30 + 20$ days.

$$= 210 + 20 \text{ days} = 230 \text{ days.}$$

4. (a) Since, 1 year = 12 months.

$$\text{So, } 3 \text{ years } 7 \text{ months} = 3 \times 12 + 7 \text{ months} \\ = 36 \text{ months} + 7 \text{ months} = 43 \text{ months}$$

$$(b) 4 \text{ years } 11 \text{ months} = 4 \times 12 + 11 \text{ months} \\ = 48 + 11 \text{ months} \\ = 59 \text{ months}$$

$$(c) 6 \text{ years } 10 \text{ months} = 6 \times 12 + 10 \text{ months} \\ = 82 \text{ months}$$

$$(d) 7 \text{ years } 4 \text{ months} = 7 \times 12 + 4 \text{ months} \\ = 88 \text{ months}$$

$$(e) 1 \text{ years } 8 \text{ months} = 12 + 8 \text{ months} = 20 \text{ months}$$

$$(f) 5 \text{ years } 1 \text{ months} = 5 \times 12 + 1 \text{ months} \\ = 61 \text{ months}$$

5. March has 31 days

$$\text{So, number of days after 6th in March} \\ = 31 - 6 = 25 \text{ days}$$

Number of days in April = 30 days

Number of days in May = 31 days

Number of days in June before 10th

$$= 10 - 1 = 9 \text{ days}$$

$$\text{Total number of days} = 25 + 30 + 31 + 9 = 95 \text{ days}$$

Thus, the total number of days between 6th March to 10th June is 95 days.

6. December has 31 days.

$$\text{So, 18 December to 31 December} = 31 - 18 = 13 \text{ days.}$$

His vacation will last for 18 days.

i.e., the school will close in January for

$$18 - 13 = 5 \text{ days.}$$

Thus, Sanket's school will reopen on 6th January.

7. January has 31 days.

$$\text{So, 26th January to 31 January} = 31 - 26 = 5 \text{ days.}$$

1st February to 28th February = 28 days.

1st March to 31st March = 31 days.

1st April to 30th April = 30 days.

1st May to 31st May = 31 days.

1st June to 28th June = 28 - 1 = 27 days.

So, the total number of days between 26th January to 28th June

$$= 5 + 28 + 31 + 30 + 31 + 27 = 152 \text{ days.}$$

8.

Swastik's birthday = 11

July 2007

His present age = 14

years 1 month 5 days

years	months	days
2007	-	7
	-	11
14	-	5
	8	16

∴ Current date is 16-8-2021 or 16 August 2021.

Chapter Assessment

$$1. (a) (iii) 8 \text{ hours } 50 \text{ minutes} = 8 \times 60 + 50 \text{ minutes} \\ = 480 + 50 \text{ minutes} = 530 \text{ minutes}$$

$$(b) (iv) 1 \text{ hour} = 60 \text{ minutes}$$

$$1 \text{ minute} = 60 \text{ seconds}$$

$$1 \text{ hour} = 60 \times 60 \text{ seconds}$$

$$1 \text{ hour} = 3600 \text{ seconds.}$$

$$(c) (ii) \text{ Since, } 1 \text{ day} = 24 \text{ hours, } 1 \text{ hour} = 60 \text{ minutes}$$

So, the number of minutes in a day = 24×60

$$(d) (i) 8 \text{ days } 8 \text{ hours} = 8 \times 24 + 8 \text{ hours} \\ = 200 \text{ hours}$$

$$(e) (i) 3 \text{ hours } 30 \text{ minutes before } 12 \text{ noon} \\ = 8:30 \text{ a.m.}$$

h	min
11	60
12	00
-	3:30
	8:30

2. Time taken by an athlete to complete a race

$$= 11 \text{ minutes } 38 \text{ seconds.}$$

He breaks the world record by 48 seconds.

min	s
1	1
11	38
0	48
11	86

World record time = 11 minutes 38 second + 48 seconds = 12 minutes 26 seconds.

Thus, the world record to complete a 5000 m race is 12 minutes 26 seconds.

3. 2 hours 25 minutes before 6:10

$$\text{p.m.} = 6 \text{ hours } 10 \text{ minutes} -$$

$$2 \text{ hours } 25 \text{ minutes} = 3 \text{ hours } 45 \text{ minutes, i.e., } 3:45 \text{ p.m.}$$

h	min
5	70
6	10
2	25
3	45

4. Isha's sleeping hours = 8 hours 45 minutes

Isha's waking time = 6:30 am

Isha go to bed 8 hours 45 minutes before 6:30 am

Time from 12 midnight to 6:30 am = 6 hours 30 minutes

∴ Remaining time = 8 hours 45 minutes - 6 hours 30 minutes = 2 hours 15 minutes

∴ Isha go to bed = 2 hours 15 minutes before 12 midnight

$$= 12 \text{ hours} - 2 \text{ hours } 15 \text{ minutes}$$

$$= 9:45 \text{ pm}$$

5. Gyan went to a movie at 7:15 p.m.

He returned after 3 hours 15 minutes

$$\therefore \text{Time when he returned} + 3 \text{ hours } 15 \text{ minutes} = 7:15 + 3 \text{ hours } 15 \text{ minutes}$$

h	min
7	15
+	
3	15

10 30

Thus, Gyan returned from movie at 10:30 p.m.

6. Time taken by Jasmin for breakfast = 25 minutes.

Time taken by her for lunch = 30 minutes.

Time taken by her for dinner = 24 minutes.

Total time she spent in eating

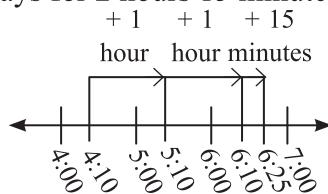
$$= (25 + 30 + 24) \text{ minutes} = 79 \text{ minutes}$$

i.e., 1 hour 19 minutes.

Thus, she spent 1 hour 19 minutes in eating.

7. Anaya went to play at 4:10 p.m.

Anaya plays for 2 hours 15 minute daily.



Starting time	Duration	Finishing time
4:10 p.m.	2 hours 15 minutes	6:25 p.m.

Thus, Anaya should return at 6:25 p.m.

8. Number of days = 17th May to 12th July

$$= 31 - 16 = 15 \text{ days} \quad [\because \text{May has 31 days}]$$

June has 30 days.

So, number of days from 1st June to 30th June
= 30 days.

1st July to 12 July = 12 days.

$$\text{Total days spent on the trip} = (15 + 30 + 12) \text{ days.} \\ = 57 \text{ days.}$$

Thus, Rohan's family spent 57 days on the trip.

Mental Maths (Page 227)

Team	A	B	C	D
Round-1	1 h 45 min 10 s	1 h 55 min 19 s	2 h 39 min 10 s	1 h 49 min 36 s
Round-2	2 h 14 min 53 s	2 h 15 min 10 s	2 h 55 min 19 s	2 h 10 min 26 s
Total Time	4 h 3 s	4 h 10 min 29 s	5 h 34 min 29 s	4 h 2 s
Rank	2nd	3rd	4th	1st

CHAPTER 13 : MONEY

Let's Recall

1. Siya saved in the first week

$$= ₹20 + ₹10 + ₹2 = ₹32$$

Rohan saved in the first week

$$= ₹20 + ₹5 + ₹2 + ₹1 + ₹0.50 = ₹28.50$$

Thus, Rohan saved ₹28.50 in the first week.

2. Siya saved in the second week

$$= ₹20 + ₹20 + ₹2 + ₹0.50 = ₹42.50 = 4250 \text{ p}$$

[\$\because ₹1 = 100 \text{ p}\$]

Thus, Siya saved 4250 p in week 2.

3. Total saving of Siya in one month

$$= ₹20 + ₹10 + ₹2 + ₹20 + ₹20 + ₹2 + ₹0.50 + ₹50 + ₹5 + ₹2 + ₹1 + ₹0.50 + ₹100 = ₹233$$

₹233 = Rupees two hundred thirty-three.

Total saving of Rohan in one Month

$$= ₹20 + ₹5 + ₹2 + ₹1 + ₹0.50 + ₹20 + ₹20 + ₹1 + ₹50 + ₹20 + ₹2 + ₹0.50 + ₹200 = ₹342$$

₹342 = Rupees three hundred forty-two.

4. Siya saved = ₹233

Rohan saved = ₹342

Thus, Rohan saved more money.

Think and Answer (Page 231)

$$₹500 \times 100 = ₹50000$$

Practice Time 13A

1. (a) 11 notes of ₹10 = ₹10 × 11 = ₹110

$$7 \text{ notes of ₹5} = ₹5 \times 7 = ₹35$$

$$3 \text{ coins of ₹10} = ₹10 \times 3 = ₹30$$

$$5 \text{ coins of ₹5} = ₹5 \times 5 = ₹25$$

$$4 \text{ coins of ₹2} = ₹2 \times 4 = ₹8$$

$$10 \text{ coins of ₹1} = ₹1 \times 10 = ₹10$$

Total amount of money

$$= ₹110 + ₹35 + ₹30 + ₹25 + ₹8 + ₹10 = ₹218$$

(b) 5 notes of ₹200 = ₹200 × 5 = ₹1000

$$6 \text{ notes of ₹100} = ₹100 \times 6 = ₹600$$

$$3 \text{ notes of ₹50} = ₹50 \times 3 = ₹150$$

$$11 \text{ notes of ₹10} = ₹10 \times 11 = ₹110$$

$$8 \text{ coins of ₹2} = ₹2 \times 8 = ₹16$$

Total amount of money

$$= ₹1000 + ₹600 + ₹150 + ₹110 + ₹16 = ₹1876$$

(c) 2 notes of ₹200 = ₹200 × 2 = ₹400

$$5 \text{ notes of ₹20} = ₹20 \times 5 = ₹100$$

$$19 \text{ notes of ₹10} = ₹10 \times 19 = ₹190$$

$$7 \text{ notes of ₹5} = ₹5 \times 7 = ₹35$$

Total amount of money

$$= ₹400 + ₹100 + ₹190 + ₹35 = ₹725$$

(d) 5 notes of ₹500 = ₹500 × 5 = ₹2500
 2 notes of ₹200 = ₹200 × 2 = ₹400
 10 notes of ₹10 = ₹10 × 10 = ₹100
 5 coins of ₹1 = ₹1 × 5 = ₹5
 Total amount of money
 = ₹2500 + ₹400 + ₹100 + ₹5 = ₹3005

(e) 3 notes of ₹500 = ₹500 × 3 = ₹1500
 7 notes of ₹200 = ₹200 × 7 = ₹1400
 4 notes of ₹100 = ₹100 × 4 = ₹400
 2 notes of ₹20 = ₹20 × 2 = ₹40
 7 coins of ₹1 = ₹1 × 7 = ₹7
 Total amount of money
 = ₹1500 + ₹1400 + ₹400 + ₹40 + ₹7
 = ₹3347.

2. Maya's mother had,

1 note of ₹200 = ₹200 × 1 = ₹200
 2 note of ₹50 = ₹50 × 2 = ₹100
 7 notes of ₹10 = ₹10 × 7 = ₹70
 3 coins of ₹5 = ₹5 × 3 = ₹15
 4 coins of ₹1 = ₹1 × 4 = ₹4

Total amount of money her mother has
 = ₹200 + ₹100 + ₹70 + ₹15 + ₹4
 = ₹389

Thus, Maya's mother has ₹389.

3. Gyan has,

3 notes of ₹200 = ₹200 × 3 = ₹600
 1 note of ₹20 = ₹20 × 1 = ₹20
 Total amount of money Gyan has
 = ₹600 + ₹20 = ₹620

Vivan has,

2 notes of ₹100 = ₹100 × 2 = ₹200
 3 notes of ₹50 = ₹50 × 3 = ₹150
 13 coins of ₹2 = ₹2 × 13 = ₹26

Total amount of money Vivan has
 = ₹200 + ₹150 + ₹26 = ₹376

Thus, Gyan has more money.

4. Siya pays,

2 notes of ₹500 = ₹500 × 2 = ₹1000
 1 note of ₹100 = ₹100 × 1 = ₹100
 3 notes of ₹20 = ₹20 × 3 = ₹60
 5 coins of ₹5 = ₹5 × 5 = ₹25

Total amount of money Siya pays
 = ₹1000 + ₹100 + ₹60 + ₹25
 = ₹1185

Thus, cost of her dress is ₹1185.

Think and Answer (Page 232)

The price of new bicycle = ₹8400.00

The price of old bicycle = ₹2,356.00

Amount of money Madhav need to pay for new bicycle = ₹8400 – ₹2359

			9			
		3	10	10		
₹	8	/	/	/		
–	2	3	5	9		
₹	6	0	4	1		

Thus, he needs ₹6041 to pay for new bicycle.

Practice Time 13B

1. (a)

	1	1	2				
₹	7	5	6	.	5	0	
₹	2	2	9	.	6	5	
+	₹	2	3	1	.	9	0
₹	1	2	1	8	.	0	5

(b)

	1	1	1	1			
₹	5	3	3	.	5	0	
₹	3	5	4	.	5	6	
+	₹	2	3	3	.	4	4
₹	1	1	2	1	.	5	0

(c)

	1	1	1					
₹	3	0	3	4	.	7	5	
₹	5	0	3	2	.	2	5	
+	₹	1	3	2	3	.	0	0
₹	9	3	9	0	.	0	0	

2.(a) Arrange the given amounts in columns and then add as shown alongside.

2	2	1	2	2
₹	3	9	7	3
₹	1	5	2	3
₹	0	2	5	6
+	₹	1	3	6
₹	7	1	1	4
				2
				0

Hence, the required sum = ₹7114.20

(b) Arrange the given amounts in columns and then add as shown alongside.

1	1	1	1	1
₹	4	5	4	2
₹	4	0	5	3
₹	4	4	6	2
+	₹	0	4	0
₹	1	3	4	5
				8
				8

Hence, the required sum = ₹13458.88.

3. (a)

$$\begin{array}{r}
 & (13) (14) & (11) \\
 & (6) \cancel{7} \cancel{4} & \cancel{7} (10) \\
 \text{₹} & 7 & 4 & 8 & . & 5 & 6 \\
 - & 3 & 4 & 6 & . & 5 & 6 \\
 \hline
 \text{₹} & 3 & 9 & 8 & . & 6 & 4
 \end{array}$$

(b)

$$\begin{array}{r}
 & (13) \\
 & (5) \cancel{7} (10) \\
 \text{₹} & 8 & 5 & 6 & . & 7 & 5 \\
 - & 3 & 5 & 2 & . & 7 & 5 \\
 \hline
 \text{₹} & 5 & 0 & 3 & . & 6 & 5
 \end{array}$$

(c)

$$\begin{array}{r}
 & (11) (9) \\
 & (4) \cancel{7} \cancel{10} (10) \\
 \text{₹} & 4 & 6 & 7 & . & 0 & 0 \\
 - & 3 & 1 & 2 & . & 1 & 6 \\
 \hline
 \text{₹} & 1 & 3 & 9 & . & 8 & 4
 \end{array}$$

4. (a) Arrange the given amounts in columns and then subtract as shown alongside.

$$\begin{array}{r}
 & (9) (9) \\
 & (1) \cancel{10} \cancel{10} (10) \\
 \text{₹} & 1 & 0 & 0 & . & 0 & 0 \\
 - & 0 & 4 & 8 & 6 & . & 0 & 0 \\
 \hline
 \text{₹} & 1 & 5 & 1 & 4 & . & 0 & 0
 \end{array}$$

Hence, the required difference = ₹1514.

(b) Arrange the given amounts in columns and then subtract as shown alongside.

$$\begin{array}{r}
 & (9) (9) \\
 & (4) \cancel{10} \cancel{10} (12) \\
 \text{₹} & 7 & 5 & 0 & . & 2 & 5 \\
 - & 3 & 2 & 6 & 7 & . & 7 & 5 \\
 \hline
 \text{₹} & 4 & 2 & 3 & 2 & . & 5 & 0
 \end{array}$$

Hence, the required difference is = ₹4232.50.

(c) Arrange the given amounts in columns and then subtract as shown alongside.

$$\begin{array}{r}
 & (9) (9) \\
 & (5) \cancel{10} \cancel{10} (10) \\
 \text{₹} & 1 & 0 & 0 & . & 0 & 0 \\
 - & 2 & 7 & 4 & 5 \\
 \hline
 \text{₹} & 3 & 2 & 5 & 5
 \end{array}$$

Hence, the required difference = ₹3255.

(d) Arrange the given amounts in columns and then subtract as shown alongside.

$$\begin{array}{r}
 & (4) (14) \\
 & (2) \cancel{0} \cancel{7} (14) \\
 \text{₹} & 4 & 0 & 6 & . & 9 & 9 \\
 - & 2 & 0 & 4 & 5 & . & 6 & 8 \\
 \hline
 \text{₹} & 2 & 0 & 0 & 9 & . & 3 & 1
 \end{array}$$

Hence, the required difference = ₹2009.31.

5.

$$\begin{array}{r}
 & (1) (1) \\
 \text{Cost of a pencil} = & \text{₹} 0 5 . 4 0 \\
 \text{Cost of an eraser} = & \text{₹} 0 4 . 6 5 \\
 \text{Cost of a geometry box} = & + \text{₹} 5 8 . 6 0 \\
 \text{Money paid to the shopkeeper} = & \hline \text{₹} 6 8 . 6 5
 \end{array}$$

Thus, she paid ₹68.65 to the shopkeeper.

6. Amount of money saved by Rupesh = ₹7554.75

$$\begin{array}{r}
 & (14) \\
 & (4) \cancel{7} \cancel{5} (14) \\
 \text{₹} & 7 & 5 & 5 & . & 7 & 5 \\
 - & 7 & 0 & 7 & 9 & . & 7 & 0 \\
 \hline
 \text{₹} & 0 & 4 & 7 & 5 & . & 0 & 5
 \end{array}$$

Difference in money = ₹475.05

Thus, Rupesh saved ₹475.05 more than his sister.

7.

$$\begin{array}{r}
 & (1) (1) (1) (1) \\
 \text{Cost price of biscuits} = & \text{₹} 3 6 5 . 6 5 \\
 \text{Cost price of bread} = & \text{₹} 0 3 7 . 4 5 \\
 \text{Cost price of toffees} = & + \text{₹} 0 1 5 . 8 5 \\
 \text{Total price of these items} = & \hline \text{₹} 4 1 8 . 9 5
 \end{array}$$

Total amount paid to the shopkeeper = ₹500

$$\begin{array}{r}
 & (9) (9) (9) \\
 & (4) \cancel{10} \cancel{10} \cancel{10} (10) \\
 \text{₹} & 5 & 0 & 0 & . & 0 & 0 \\
 - & 4 & 1 & 8 & . & 9 & 5 \\
 \hline
 \text{₹} & 0 & 8 & 1 & . & 0 & 5
 \end{array}$$

Thus, the shopkeeper returned ₹81.05 to Anaya.

8.

$$\begin{array}{r}
 & (1) (2) (1) (1) (1) \\
 \text{Cost of a shirt} = & \text{₹} 2 6 6 3 . 7 5 \\
 \text{Cost of a trousers} = & \text{₹} 2 4 6 2 . 4 5 \\
 \text{Cost of a pair of socks} = & + \text{₹} 0 1 7 5 . 0 5 \\
 \text{Total cost of these items} = & \hline \text{₹} 5 3 0 1 . 2 5
 \end{array}$$

Total amount in her account = ₹6000

$$\begin{array}{r}
 & (9) (9) (9) (9) \\
 & (5) \cancel{10} \cancel{10} \cancel{10} (10) \\
 \text{₹} & 6 & 0 & 0 & . & 0 & 0 \\
 - & 5 & 3 & 0 & 1 & . & 2 & 5 \\
 \hline
 \text{₹} & 0 & 6 & 9 & 8 & . & 7 & 5
 \end{array}$$

Thus, Riya has ₹698.75 left in her account after making the payment.

Practice Time 13C

1. (a)
$$\begin{array}{r} \text{₹} 1 \ 4 \ 8 \\ \times \quad \quad 4 \\ \hline \text{₹} 5 \ 9 \ 2 \end{array}$$

Hence, $\text{₹}148 \times 4 = \text{₹}592$

(b)
$$\begin{array}{r} \text{₹} 7 \ 6 \ . \ 7 \ 6 \\ \times \quad \quad \quad 8 \\ \hline \text{₹} 6 \ 1 \ 4 \ . \ 0 \ 8 \end{array}$$

Hence, $\text{₹}76.76 \times 8 = \text{₹}614.08$

(c)
$$\begin{array}{r} \text{₹} 2 \ 1 \ 4 \ . \ 6 \ 8 \\ \times \quad \quad \quad 1 \ 0 \\ \hline \text{₹} 0 \ 0 \ 0 \ . \ 0 \ 0 \\ + \text{₹} 2 \ 1 \ 4 \ 6 \ . \ 8 \ 0 \\ \hline \text{₹} 2 \ 1 \ 4 \ 6 \ . \ 8 \ 0 \end{array}$$

Hence, $\text{₹}214.68 \times 10 = \text{₹}2146.80$

(d)
$$\begin{array}{r} \text{₹} 3 \ 5 \ 4 \ . \ 6 \ 5 \\ \times \quad \quad \quad 2 \ 4 \\ \hline \text{₹} 1 \ 4 \ 1 \ 6 \ 2 \ . \ 6 \ 0 \\ + \text{₹} 7 \ 0 \ 8 \ 1 \ 3 \ . \ 0 \ 0 \\ \hline \text{₹} 8 \ 4 \ 9 \ 7 \ 5 \ . \ 6 \ 0 \end{array}$$

Hence, $\text{₹}3540.65 \times 24 = \text{₹}84975.6$

2. (a)
$$\begin{array}{r} 6 \overline{) 64.50} (10.75 \\ - \quad \quad \quad \downarrow \\ 045 \\ - 42 \\ \hline 030 \\ - 30 \\ \hline 0 \end{array}$$

Hence, $\text{₹}64.50 \div 6 = \text{₹}10.75$

(b)
$$\begin{array}{r} 9 \overline{) 315.54} (35.06 \\ - 27 \downarrow \\ 045 \\ - 45 \downarrow \\ \hline 054 \\ - 54 \\ \hline 0 \end{array}$$

Hence, $\text{₹}315.54 \div 9 = \text{₹}35.06$

(c)
$$\begin{array}{r} 12 \overline{) 502.80} (41.90 \\ - 48 \downarrow \\ 022 \\ - 12 \downarrow \\ 108 \\ - 108 \\ \hline 0 \end{array}$$

Hence, $\text{₹}502.80 \div 12 = \text{₹}41.90$

(d)
$$\begin{array}{r} 15 \overline{) 3056.10} (203.74 \\ - 30 \downarrow \\ 056 \\ - 45 \downarrow \\ 111 \\ - 105 \downarrow \\ 0060 \\ - 60 \\ \hline 0 \end{array}$$

Hence, $\text{₹}3056.10 \div 15 = \text{₹}203.74$

3. The cost of 1 kg wheat = $\text{₹}22.50$

So, the cost of 15 kg wheat = $\text{₹}22.50 \times 15 = \text{₹}337.50$

$$\begin{array}{r} \text{₹} 2 \ 2 \ . \ 5 \ 0 \\ \times \quad \quad \quad 1 \ 5 \\ \hline \text{₹} 1 \ 1 \ 2 \ . \ 5 \ 0 \\ + \text{₹} 2 \ 2 \ 5 \ . \ 0 \ 0 \\ \hline \text{₹} 3 \ 3 \ 7 \ . \ 5 \ 0 \end{array}$$

4. Cost of one pen drive

= $\text{₹}1050.65$

So, the cost of 15 pen

drives = $\text{₹}1050.65 \times$

15

$$\begin{array}{r} \text{₹} 1 \ 0 \ 5 \ 0 . 6 \ 5 \\ \times \quad \quad \quad \quad \quad 1 \ 5 \\ \hline 5 \ 2 \ 5 \ 3 . 2 \ 5 \\ + 1 \ 0 \ 5 \ 0 \ 6 . 5 \ 0 \\ \hline \text{₹} 1 \ 5 \ 7 \ 5 \ 9 . 7 \ 5 \end{array}$$

Thus, the cost of 15 pen drives is $\text{₹}15759.75$.

5. Cost of one bicycle

= $\text{₹}5875.00$ or $\text{₹}5875$

So, the cost of 5 bicycles =

$\text{₹}5875 \times 5$

$$\begin{array}{r} \text{₹} 5 \ 8 \ 7 \ 5 \\ \times \quad \quad \quad 5 \\ \hline \text{₹} 2 \ 9 \ 3 \ 7 \ 5 \end{array}$$

Thus, the cost of 5 bicycles is $\text{₹}29375$.

6. Radhika's monthly salary = $\text{₹}48550.75$

So, Radhika's

annualy salary =

$\text{₹}48550.75 \times 12$

$$\begin{array}{r} \text{₹} 4 \ 8 \ 5 \ 5 \ 0 . 7 \ 5 \\ \times \quad \quad \quad 1 \ 2 \\ \hline 9 \ 7 \ 1 \ 0 \ 1 . 5 \ 0 \\ + 4 \ 8 \ 5 \ 5 \ 0 \ 7 . 5 \ 0 \\ \hline \text{₹} 5 \ 8 \ 2 \ 6 \ 0 \ 9 . 0 \ 0 \end{array}$$

Thus, Radhika's annual salary is $\text{₹}582609$.

7. Cost of 10 kg rice = $\text{₹}650.00$ or $\text{₹}650$

$\text{₹}650 \div 10$

$$\begin{array}{r} 10 \overline{) 650} (65 \\ - 60 \downarrow \\ 50 \\ - 50 \\ \hline 0 \end{array}$$

Thus, the cost of 1 kg rice = $\text{₹}65$

8. Total expenditure for five children = $\text{₹}2416$

$$\begin{array}{r} 5 \overline{) 2416} (483.2 \\ - 20 \downarrow \\ 41 \\ - 40 \downarrow \\ 16 \\ - 15 \\ \hline 10 \\ - 10 \\ \hline 0 \end{array}$$

Thus, each child contribute $\text{₹}483.20$.

9. Mona gets pocket money per week = $\text{₹}40.60$

So, Mona gets pocket money daily = $\text{₹}40.60 \div 7$

$$\begin{array}{r} 7 \overline{) 40.60} (5.80 \\ - 35 \downarrow \\ 56 \\ - 56 \\ \hline 0 \end{array}$$

Thus, Mona gets $\text{₹}5.80$ as daily pocket money.

10. Total amount with Iqra = ₹76
 She has 4 times money as Prachi.
 So, amount with Prachi
 $= ₹76 \div 4 = ₹19$

Therefore, Iqra has more money than
 Prachi by
 $= ₹76 - ₹19 = ₹57$

Thus, Iqra has ₹57 more than Prachi.

$$\begin{array}{r} 76 \\ \times 4 \\ \hline 36 \\ -36 \\ \hline 0 \end{array} \quad (19)$$

Practice Time 13D

APNA STATIONERY				
Name: _____		Date: _____		
Address: _____		Bill No. 125		
S.No.	Items	Quantity	Rate (₹)	Amount (₹)
1.	Notebooks	6	55.40	332.40
2.	Files	8	25.00	200.00
3.	Pens	2	60.50	121.00
4.	Pencils	12	5.75	69.00
		Total =		722.40

2. (a) Cost of 1 kg potatoes = ₹16.50
 Cost of 1 kg beetroot = ₹60.00 or ₹60
 Cost of 2 kg tomatoes = ₹85 \times 2 = ₹170
 Total cost of these items
 $= ₹16.50 + ₹60.00 + ₹170 = ₹246.5$
 Total amount with Gyan = ₹500
 Therefore, amount left with Gyan
 $= ₹500 - ₹246.5 = ₹253.5$

(b) Cost of 1 kg carrots = ₹40.30
 Cost of 2 kg tomatoes = ₹85.00 \times 2 = ₹170
 Cost of 1 kg brinjals = ₹25.25
 Total cost of these items
 $= ₹40.30 + ₹170.00 + ₹25.25 = ₹235.55$
 Total amount with Siya = ₹350
 Therefore, amount left with Siya.
 $= ₹350 - ₹235.55 = ₹144.45$

(c) Cost of 1 kg cucumber = ₹25.90
 Cost of 2 kg beetroots = ₹60 \times 2 = ₹120
 Cost of 1 kg cauliflower = ₹35.10
 Total cost of these items
 $= ₹25.90 + ₹120.00 + ₹35.10 = ₹181$
 Total amount with Meera = ₹200
 Therefore, amount left with Meera
 $= ₹200 - ₹181.00 = ₹19$

Chapter Assessment

1. (a) (ii) Total amount
 $= ₹500 + ₹500 + ₹200 + ₹20 + ₹20 + ₹5$
 $+ ₹5 + ₹5 + ₹5 = ₹12060.$

(b) (iii) ₹1 + ₹2 + ₹5 + ₹10 + ₹20 + ₹50
 $+ ₹100 = ₹188$

(c) (iii) Cost of a chocolate box = ₹220
 So, the cost of biscuits box
 $= (₹220 - ₹30) = ₹190$

Total cost of chocolate box and biscuits box
 $= ₹220 + ₹190 = ₹410$

(d) (i) Cost of one pencil = ₹4.50
 Cost of 18 pencils = ₹4.50 \times 18 = ₹81

2. Donation for flood disaster relief fund of each student = ₹500

Anaya took 2 notes of ₹200 = 2 \times ₹200 = ₹400

5 notes of ₹10 = ₹5 \times ₹10 = ₹50

9 coins of ₹5 = 9 \times ₹5 = ₹45

Total amount with Anaya
 $= ₹400 + ₹50 + ₹45 = ₹495$

No, she carried ₹495 which is ₹5 less than ₹500.

3. Radhika withdrew:

Two 200-rupee notes = 2 \times ₹200 = ₹400

Fifty-one 100-rupee notes = 51 \times ₹100 = ₹5100

Five 500-rupee notes = 5 \times ₹500 = ₹2500

Total amount withdrawn from the ATM by Radhika = ₹400 + ₹5100 + ₹2500 = ₹8000

4. Aarush borrowed from his friend = ₹3000

The very next day, he returned,

Three notes of ₹500 = 3 \times ₹500 = ₹1500

and seven notes of ₹100 = 7 \times ₹100 = ₹700

Total amount = ₹1500 + ₹700 = ₹2200

Amount of money Aarush owes his friend
 $= ₹3000 - ₹2200 = ₹800$

5. During a visit to Agra,

Money spent on hotel charges = ₹4820

Money spent on transport = ₹3000

Money spent on food = ₹1850

Total money spent on trip

= ₹4820 + ₹3000 + ₹1850 = ₹9670

Money spent after discount = ₹9670 - ₹500
 $= ₹9170$

Thus, ₹9170 total amount paid by Mr. Mahesh.



6. (a)

COLD-COLD ICE-CREAM PARLOUR				
Name:	Date: _____			
Address:		Bill No. _____		
S.No.	Items	Quantity	Rate (₹)	Amount (₹)
1.	Pineapple	2	60.00	120.00
2.	Almond paraline	1	70.00	70.00
3.	Strawberry	3	80.00	240.00
4.	Butter-scotch ice-cream	1	100.00	100.00
Total =				530.00

(b)

COLD-COLD ICE-CREAM PARLOUR				
Name:	Date: _____			
Address:		Bill No. _____		
S.No.	Items	Quantity	Rate (₹)	Amount (₹)
1.	Chocolate	1	55.00	55.00
2.	Tooti Frooti	3	75.00	225.00
3.	Vanila Sugarfree	2	90.00	180.00
4.	Pineapple	1	60.00	60.00
5.	Butter-scotch Ice-cream	2	100.00	200.00
Total =				720.00

7. Cost of a pair of headphones = ₹1550.00

Cost of a power bank = ₹1030.00

Discount on second item = ₹225.00

Cost of power bank after discount

= ₹1030.00 – ₹225.00 = ₹805

Total cost of both the items after discount

= ₹1550.00 + ₹805.00 = ₹2355.

Thus, ₹2355 amount of money need to pay for the two items.

8. Rekha has only one 100-rupee note = ₹100

One 50-rupee note = ₹50

and three 5-rupee coins = $3 \times ₹5 = ₹15$

Total amount with Rekha

= ₹100 + ₹50 + ₹15 = ₹165

Rekha picks up vegetables worth ₹200

∴ More money she needs to buy the vegetables

= ₹200 – ₹165 = ₹35

Thus, she needs ₹35 more to buy those vegetables.

9. Earning of Rajesh in an hour = ₹71

His working hours = 6 hours

His earning in 6 hours = $₹71 \times 6 = ₹426$

His earning in a week = $6 \times ₹426 = ₹2556$

(∴ Sunday is a holiday)

Thus, Rajesh earns ₹2556 in a week.

10. Cost of 8 sketch pens = ₹72.00

So, cost of 1 sketch pen = $₹72.00 \div 8 = ₹9$

Amount of money with Neha = ₹45

Number of sketch pens that can be bought with the amount she has = $₹45 \div 9 = 5$

Thus, 5 sketch pens can be bought with ₹45.

Mental Maths (Page 239)

1. (c) ₹1 = 100 paise

Number of 10-paise coins = $100 \div 10 = 10$

Thus, ten 10-paise coins make ₹1.

2. Number of 20-rupee notes to make ₹1000

= ₹1000 ÷ ₹20 = 50

Thus, 50 twenty-rupee notes make ₹1000.

3. (a) ₹2.50 + ₹7.50 = ₹10 (∴ ₹10 – ₹2.50 = ₹7.50)

(b) ₹20 – ₹10.25 = ₹9.75

4. Cost of 1 geometry box = ₹80

Amount of money with Raman = ₹55

Amount of money he short off = ₹80 – ₹55 = ₹25

Thus, he needs ₹25 more to buy the geometry box.

5. Cost of 12 crayons packet = ₹36

So, cost of 1 crayon = ₹36 ÷ 12 = ₹3

Thus, the cost of 1 crayon is ₹3.

Brain Sizzlers (Page 239)

Total number of coins in the donation box = 1000

Half of them are of ₹10 coins

So, number of ₹10 coins = $\frac{1000}{2} = 500$ coins

So, value of these coins = $500 \times ₹10 = ₹5000$

One-fourth of remaining amount are of ₹5 coins,

So, number of ₹5 coins = $\frac{1}{4}$ of 500 = 125 coins

So, value of these coins = $125 \times ₹5 = ₹625$

Rest coins are of ₹2. So, number of 2-rupee coins = $1000 - 500 - 125 = 375$ coins

So, value of these coins = $375 \times ₹2 = ₹750$

Total amount in a donation box = ₹5000 + ₹625 + ₹750 = ₹6375

Thus, ₹6375 was collected in a donation box.

CHAPTER 14 : DATA HANDLING

Get Ready

Stationary	Tally Marks	Number of Items
Pencil		4
Notebook		3
Pen		2
Sharpener		2
Eraser		3
Colour Box		2

Practice Time 14A

Colours	Tally marks	Number of students
Red		7
Pink		5
Blue		6
Green		2
Black		5
Purple		4
Yellow		3
White		1
Brown		2

(a) 7 students like red colour.
 (b) 3 students like yellow colour.
 (c) White is the least favourite colour of the students.
 (d) Red is the most favourite colour of the students.

Name of Games	Number of Students
Football	6
Cricket	7
Badminton	8
Volleyball	2
Basketball	5

Key:  = 6 students.

Mode of Transports	Number of Children
School bus	8
Car	4
Walking	5
Auto-rickshaw	6
Bicycle	5

Key:  = 5 students.

4. (a) GK books is read by the maximum number of students.

(b) Number of students who read comics = 90
 Number of students who read storybooks = 60
 Difference = $90 - 60 = 30$

(c) Total number of students
 $= 60 + 90 + 100 + 40 + 40 = 330$

5. (a) 120 orange-trees are there in the orchard.
 (b) Total number of fruit-trees in the orchard
 $= 15 \times 4 + 15 \times 6 + 15 \times 10 + 15 \times 8 + 15 \times 5$
 $= 60 + 90 + 150 + 120 + 75 = 495$

(c) Number of Apple trees = $15 \times 6 = 90$
 Number of Mango trees = $15 \times 4 = 60$
 $\therefore 90 - 60 = 30$ more Apple trees are there than Mango trees.
 (d) Mango and Apple trees together is equal to the number of Guava trees in the orchard.

Practice Time 14B

1. (a) Taj mahal was the most popular among the students.

(b) 14 students visited the Taj mahal.

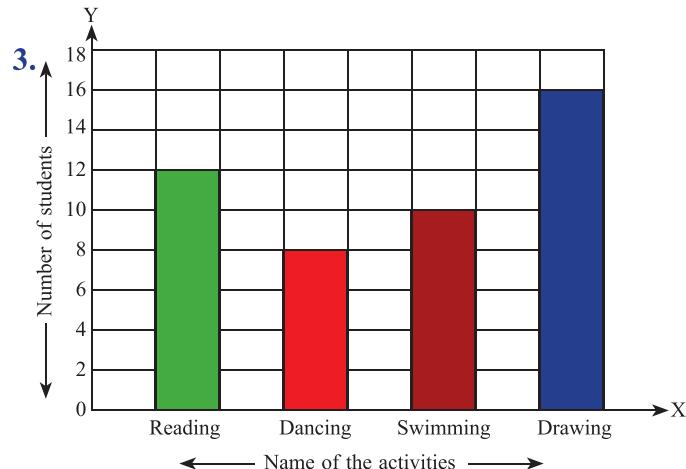
(c) Number of students visited the Red Fort = 12
 Number of students visited the Zoo = 8
 $12 - 8 = 4$ students visited the zoo than the red fort.

(d) Qutub Minar was the least favourite among the students.

2. (a) Siya saved ₹300 in the month of June.

(b) She saved least amount of money in the month of March
 (c) She saved most amount of money in the month of June.

(d) Her total savings in six months = $200 + 150 + 100 + 250 + 150 + 300 = 1150$.



Brain Sizzlers (Page 250)

1. Maximum number of students enrolled in Art activity.
2. Minimum number of students enrolled in embroidery activity.
3. $10 + 11 = 21$ students participated in dance and music.

4.	Activities	Tally marks	Number of Students
	Art		14
	Drawing		13
	Dance		10
	Embroidery		4
	Music		11
	Yoga		12

Chapter Assessment

1. (a) (iii) The information collected in numeric form is called data.

(b) (i) The representation of data in which pictures are used is called pictograph.

(c) (ii) Each bar in a bar graph has equal width.

2. (a) There are $(2 \times 4) = 8$ pink kites are sold.

(b) Red colour kite was sold most by the shopkeeper.

(c) Pink colour kite was sold least by the shopkeeper.

(d) Total number of kites sold by the shopkeeper on Independence day
 $= 4 \times 7 + 4 \times 4 + 4 \times 6 + 4 \times 2 + 4 \times 4 + 4 \times 3 = 28 + 16 + 24 + 8 + 16 + 12 = 104$

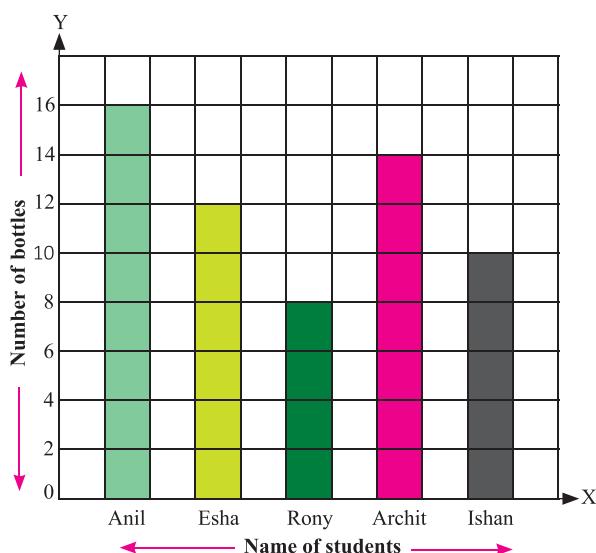
3. Classes	Number of Saplings
I	
II	
III	
IV	
V	
VI	

- (a) Students of class II planted 60 saplings.
- (b) Students of class IV planted 100 saplings.

(c) Class IV planted the highest number of saplings.
 (d) Class I planted the minimum number of saplings.
 (e) Total number of saplings planted by all the classes = $50 + 60 + 70 + 100 + 80 + 80 = 440$

4. (a) 120 students went to the zoo.
(b) Class IV has 40 students that went to the zoo.
(c) 3 classes, i.e., class I, class II and class V
students have less than 30 students that visited
the zoo.
(d) 25 students of class V went to the zoo.
(e) Total students = 120
No. of students who can accommodate in a bus
= 30
$$\therefore 120 \div 30 = 4$$

Thus, 4 buses are required for all to go to the
zoo.



MODEL TEST PAPER - 2

A. 1. (a) The flag post is always perpendicular to the ground.

2. (d) The square has 4 line(s) of symmetry.

3. (b) The letter H has 2 lines of symmetry.

4. (b) $20 \text{ days} = 20 \div 7 \text{ weeks} = 2 \text{ weeks } 6 \text{ days.}$

$$\begin{array}{r} 7) 20 (2 \rightarrow \text{weeks} \\ \underline{-} \quad 14 \\ \underline{\quad 06} \rightarrow \text{Days} \end{array}$$

5. (b) There are 100 years in 1 century.

6. (a) Diameter of a circle is two times of the radius of the circle.

7. (c) Perimeter of a rectangle = $2 \times (\text{length} + \text{breadth})$

8. (c) $2 \text{ kL } 3 \text{ hL} = (2 \times 100) \text{ daL} + (3 \times 10) \text{ daL}$
 $= 200 \text{ daL} + 30 \text{ daL} = 230 \text{ daL.}$

9. (d) Tally mark ~~||||~~ represents 5 observations.

10. (b) Since, 1 ton = 1000 kg and 1 quintal = 100 kg
So, 3 tons 5 quintals
 $= (3 \times 1000) \text{ kg} + (5 \times 100) \text{ kg}$
 $= 3000 \text{ kg} + 500 \text{ kg} = 3500 \text{ kg}$

B. 1. A brick has 12 edges.

2. A triangle has 3 sides and 3 corners.

3. A cuboidal box has 6 faces and 8 corners.

4. Diameter divides the circle into two equal halves.

5. 2, 4, 8, 14, 22, 32. $[\because 2+2=4, 4+4=8,$
 $8+6=14, 14+8=22, 22+10=32]$

6. Representation of data using rectangles is called a bar graph.

7. 11:55 p.m. can be written in 24-hour clock as 2355 hours.

8. 48 km 10 hm 7 dam = $(480000 + 10000 + 100)$ dm = 490700 dm.

9. Radii of circle are of equal length.

10. Circumference is the distance around the circle, it is the length of the circle.

C. 1. Water carried by a water tanker = 16 kL
Water distributed in colony A = 6 kL 950 L
Water distributed in colony B
 $= 16 \text{ kL} - 6 \text{ kL } 950 \text{ L} = 9 \text{ kL } 50 \text{ L}$

KL	L
1 6 . 0 0 0	
- 6 . 9 5 0	
9 . 0 5 0	

2. (a) Rohan spend for the meal = fried rice + soup = ₹75.50 + ₹110.50 = ₹186

(b) Zoya spend for the meal = Salad + lemon tea = ₹250.25 + ₹55.00 = ₹305.25

3. (a) 12 August to 23 September

August has 31 days

So, $31 - 12 = 19$ days.

Ist September to 23 September = 22 days
 $= 41$ days.

(b) 29 March to April 5

March has 31 days

So, $31 - 29 = 2$ days.

Between 1st April to 5 April = 4 days.

Total number of days = 2 days + 4 days
 $= 6$ days

4. Cost of one potato bun = ₹15.00

Cost of 5 buns = ₹15.00 \times 5 = ₹75.00

She gave to the shopkeeper = ₹100

Money she will get back = ₹100 - ₹75 = ₹25

Thus, she will get back ₹25 from the shopkeeper.

5. Total weights of onions = 42 kg

Weight of onions sold = 22 kg 250 g

Onions left with him = 42 kg - 22 kg 250 g

kg	g
4 2 . 0 0 0	
- 2 2 . 2 5 0	
1 9 . 7 5 0	

Thus, 19 kg 750 g onions are left with him.

6. Length of rectangular field = 112 m

Breadth of rectangular field = 85 m

Perimeter of rectangular field

$= 2(l+b) = 2(112+85) = 2 \times 197 \text{ m} = 394 \text{ m}$

Length of barbed wire to go 5 rounds

$= 5 \times 394 \text{ m} = 1970 \text{ m}$

7. (a) Name of this polygon = Quadrilateral ABCD

(b) Name of four vertices = A, B, C, D

(c) Name of four line segments

$= \overline{AB}, \overline{BC}, \overline{CD}, \overline{DA}$

(d) Name of all four angles = $\angle ABC, \angle BCD, \angle CDA, \angle DAB$.

8.

Mark Obtained by four Friends in Maths Test

