



# ASSIGNMENT-6



Marks Obtained: \_\_\_\_\_

Student's Name: \_\_\_\_\_ Section: \_\_\_\_\_

Roll Number: \_\_\_\_\_ Date: \_\_\_\_\_

### A. Fill in the blanks.

1. The maximum possible number of digits in the product of any two three-digit numbers is .....
2. The smallest 6-digit palindromic number formed by using each of the digits 3, 7, and 8 exactly twice is .....
3. A number with more digits is ..... than a number with fewer digits.
4. A cell is called a ..... if its number is smaller than its adjacent cells.

### B. Label True or False.

1. The difference between the largest and the smallest 3-digit palindromic numbers is a palindromic number. ....
2. A cell adjacent to a supercell is always a subcell. ....
3. The difference of two 3-digit numbers is always a 1-digit or 2-digit number. ....
4. The smallest palindromic number made with two different digits is 101. ....
5. The estimated value of 6359 to the nearest hundreds is 6300. ....

### C. Match the following.

Column I	Column II
1. The largest 5-digit number made by using 4, 5, and 9	(a) 45954
2. The smallest palindromic number having digits 4, 5, and 9	(b) 50949
3. Kaprekar's constant for 3-digit numbers	(c) 2915
4. Product of the successor and predecessor of 54	(d) 99954
5. The product of 111 and 459	(e) 495

### D. Do as directed.

1. Consider two numbers that read the same from forward and backward (palindromes). Is the sum of any two palindromic numbers always a palindrome? Provide examples to support your viewpoint, and describe any patterns or exceptions you observe.
2. How many rounds does the number 3427 take to reach the Kaprekar constant?