



Power play

Learning Objectives

After studying this chapter, students will be able to...

- ◆ apply the concept of doubling
- ◆ introduce exponential notation
- ◆ understand exponential growth
- ◆ understand how to express large numbers or values using powers and exponents
- ◆ define exponential growth and recognise how it differs from linear growth
- ◆ explore real-world examples of exponential growth
- ◆ use exponential growth to compare large quantities
- ◆ explore how scientific notation can simplify representing and comparing very large numbers

LESSON PLAN

Suggested number of periods: 12

Suggested Teaching Aids: Textbook Math Genius 8, blackboard or whiteboard, pens, pencils, chalk/ marker, notebook, paper, chit/number cards/flash cards, etc.

Keywords: Base, exponent, power, power of a power, scientific notation, standard form, multiplying exponents, dividing exponents, negative exponents.

Prerequisite knowledge: Students must be familiar with a strong foundation in multiplication, division, addition, and subtraction of integers and rational numbers.

NEP feature: This method of teaching provides experiential learning opportunities to the students and allows them to work with each other, which helps in their holistic development.

Periods: 1–3

Topic: Introduction(Exponential Notation and Operation)

NEP Skills: Discussion-Based Learning, Holistic Skills

TEACHER-PUPIL ACTIVITY

The teacher will start the topic interactively by asking questions related to the students' real-life experiences. For example,

- If you could double your money every day, how much would you have after 10 days? What about after 20 days?
- What happens when you keep multiplying a number by itself over and over again? For example, if you have 2 and multiply it by 2, how big will it be if you do that several times?
- What would happen if you started with one follower on social media and doubled the followers every day? How many followers will you have after a month?