

Percentage and Average

SPECIFIC OBJECTIVES

The students will

- know the meaning of per cent and average.
- understand the need for percentage.
- learn to convert a fraction into a percentage and vice versa.
- learn how to convert decimals into percentages and percentages into decimals.
- be able to find out the percentage of a quantity.
- know how to calculate the average of a set of data.
- understand the properties of average.

CONTENTS EXPLAINED INSIDE THE CHAPTER

- Percentage (pages 76–77)
- Converting Fractions into Percentages and Vice Versa (pages 78–80)
- Decimals and Percentages (pages 80–81)
- Percentage of a Number or Quantity (pages 81–82)
- Average (pages 83–85)

TEACHING AIDS

A weighing machine, a measuring tape/metre rod, paper, a pencil, etc.

TEACHING STRATEGY

- First, the teacher should talk to them about the percentage used in daily life. She should discuss with them why they need to know percentage. Then, she should explain how to convert fractions into percentages and vice versa. For text and exercise, she should go to pages 76–80.
- Further, she should explain to them the method of converting decimals into percentages and percentages into decimals. Also, she should develop the idea to find out the percentages. For text and exercise, she should go to pages 80–82.
- After that, the teacher should explain to them the term ‘average’ and develop the ideas to calculating it for the given data. She should also discuss with them its properties. For text and exercise, she should go to pages 83–85.

- Finally, the teacher should involve the students in performing Maths Lab Activity.

EXPECTED LEARNING OUTCOMES

Students are able to

- understand the terms 'percentage' and 'average'.
- convert a fraction/decimal into a percentage.
- express a percentage into a fraction/decimal.
- calculate the percentage of a quantity or number.
- find out the average of the given data.
- know the importance of a percentage/average in daily life.
- apply these concepts to tackle the problems in day-to-day situations.

SUGGESTED GAME

Aim: To find the average of different sets of data in this Maths Card game.


Materials: One deck of playing cards, average record sheets, paper and a pencil

Note: This game may be played in a group of 2–5 students.

Method:

1. First, shuffle the deck and deal a certain number of cards to each player.
2. Then, the players record the value of their cards. For the purpose of this game, aces = 1, jacks = 11, queens = 12 and kings = 13.
3. Thereafter, players find the average of their cards. This is done by adding the value of all cards and then dividing by the number of cards.

Player's Name _____	
Round	Score
1.	
2.	
3.	
4.	
5.	
6.	
7.	
8.	
9.	
10.	
Final Score	



4. The players record their average on the record sheet.
5. The players play continue till 10 rounds. At the end of ten rounds, the players should add all their, averages (mean), then find the mean by dividing by 10. Finally, the player with the highest final score wins.