### Class 6

### **Important Formulas**

## **Chapter 12 – Ratio and Proportion**

- 1. The ratio of a number `a' to another number 'b' (  $b \neq 0$  ) is a fraction  $\frac{a}{b}$  and is written as a: b.
- 2. In the ratio a: b, the first term is a and the second term is b.
- 3. A ratio is said to be in the simplest form if its two terms have no common factor other than
- 4. The ratio of two numbers is usually expressed in its simplest form.
- 5. The ratio of two quantities is an abstract quantity, i.e., it has no units in itself.
- 6. An equality of two ratios is called a proportion. If a:b=c:d, then we write a:b::c:d.
- 7. The numbers a, b, c, d are in proportion if the ratio of the first two is equal to the ratio of last two, i.e., a : b = c : d.
- 8. If four numbers a, b, c, d are in proportion, then a and d are known as extreme terms and b and c are called middle terms.
- 9. Four numbers are in proportion if the product of extreme terms is equal to the product of middle terms, i.e., a : b :: c : d if and only if ad = bc.
- 10. From the terms of a given proportion, we can make three more proportions.
- 11. If a : b = b : c, then a, b, c are said to be in continued proportion.
- 12. if a, b, c are in continued proportion, i.e., a : b :: b : c, then b is called the mean proportional between a and c.
- 13. More is the number of articles, more is the value.
- ∴Value of a given number of articles = (Value of one article) x (Number of articles)
- 14. Less is the number of articles, less is the value,

∴Value of one article = 
$$\frac{\text{Value of given number of articles}}{\text{Number of articles}}$$

15. The method of finding first the value of one article from the value of the given number of articles and then the value of the required number of articles is called the unitary method.

### NCERT Solutions for Class 6 Maths Chapter 1

- Knowing our Numbers Class 6 Ex 1.1
- Knowing our Numbers Class 6 Ex 1.2
- Knowing our Numbers Class 6 Exercise 1.3

## NCERT Solutions for Class 6 Maths Chapter 2

• Whole Numbers Class 6 Ex 2.1

## NCERT Solutions for Class 6 Maths Chapter 3

- Playing with Numbers Class 6 Ex 3.1
- Playing with Numbers Class 6 Ex 3.2
- Playing with Numbers Class 6 Ex 3.3
- Playing with Numbers Class 6 Ex 3.4
- Playing with Numbers Class 6 Exercise 3.5
- Playing with Numbers Class 6 Exercise 3.6
- Playing with Numbers Class 6 Exercise 3.7

## NCERT Solutions for Class 6 Maths Chapter 4

- Basic Geometrical Ideas Class 6 Ex 4.1
- Basic Geometrical Ideas Class 6 Ex 4.2
- Basic Geometrical Ideas Class 6 Ex 4.3
- Basic Geometrical Ideas Class 6 Exercise 4.4
- Basic Geometrical Ideas Class 6 Exercise 4.5
- Basic Geometrical Ideas Class 6 Exercise 4.6

### NCERT Solutions for Class 6 Maths Chapter 5

- Understanding Elementary Shapes Class 6 Ex 5.1
- Understanding Elementary Shapes Class 6 Ex 5.2
- Understanding Elementary Shapes Class 6 Ex 5.3
- Understanding Elementary Shapes Class 6 Ex 5.4
- Understanding Elementary Shapes Class 6 Ex 5.5
- Understanding Elementary Shapes Class 6 Exercise 5.6
- Understanding Elementary Shapes Class 6 Exercise 5.7
- Understanding Elementary Shapes Class 6 Exercise 5.8
- Understanding Elementary Shapes Class 6 Exercise 5.9

# Class 6 Maths NCERT Solutions Chapter 6

- Integers Class 6 Ex 6.1
- Integers Class 6 Ex 6.2
- Integers Class 6 Exercise 6.3

### Class 6 Maths NCERT Solutions Chapter 7

• Fractions Class 6 Ex 7.1

- Fractions Class 6 Ex 7.2
- Fractions Class 6 Ex 7.3
- Fractions Class 6 Exercise 7.4
- Fractions Class 6 Exercise 7.5
- Fractions Class 6 Exercise 7.6

### Class 6 Maths NCERT Solutions Chapter 8

- Decimals Class 6 Ex 8.1
- Decimals Class 6 Ex 8.2
- Decimals Class 6 Ex 8.3
- Decimals Class 6 Exercise 8.4
- Decimals Class 6 Exercise 8.5
- Decimals Class 6 Exercise 8.6

## Class 6 Maths NCERT Solutions Chapter 9

- Data Handling Class 6 Ex 9.1
- Data Handling Class 6 Ex 9.2
- Data Handling Class 6 Exercise 9.3
- Data Handling Class 6 Exercise 9.4

## Class 6 Maths NCERT Solutions Chapter 10

- Mensuration Class 6 Ex 10.1
- Mensuration Class 6 Ex 10.2
- Mensuration Class 6 Exercise 10.3

# Class 6 Maths NCERT Solutions Chapter 11

- Algebra Class 6 Ex 11.1
- Algebra Class 6 Ex 11.2
- Algebra Class 6 Exercise 11.3
- Algebra Class 6 Exercise 11.4
- Algebra Class 6 Exercise 11.5

### Class 6 Maths NCERT Solutions Chapter 12

- Ratio and Proportion Class 6 Ex 12.1
- Ratio and Proportion Class 6 Ex 12.2
- Ratio and Proportion Class 6 Exercise 12.3

## Class 6 Maths NCERT Solutions Chapter 13

- Symmetry Class 6 Ex 13.1
- Symmetry Class 6 Exercise 13.2
- Symmetry Class 6 Exercise 13.3

## Class 6 Maths NCERT Solutions Chapter 14

- Practical Geometry Class 6 Ex 14.1
- Practical Geometry Class 6 Ex 14.2
- Practical Geometry Class 6 Ex 14.3
- Practical Geometry Class 6 Exercise 14.4
- Practical Geometry Class 6 Exercise 14.5
- Practical Geometry Class 6 Exercise 14.6

#### Chapter 1 Knowing Our Numbers

- Introduction
- Comparing Numbers Worksheet
- Large Numbers In Practice
- Using Brackets
- Roman Numerals Chart

#### Chapter 2 Whole Numbers

- Introduction
- Whole Numbers
- The Number Line
- Properties of Whole Numbers
- Patterns In Whole Numbers

#### Chapter 3 Playing With Numbers

- Introduction
- Factors And Multiples Worksheet
- Prime And Composite Numbers Chart and Worksheets
- Divisibility Rules 13, 12, 11, 10, 9, 8, 7, 6, 5, 4, 3,2
- Common Factors And Common Multiples
- Some More Divisibility Rules
- Prime Factorisation Worksheets
- Highest Common Factor Worksheets
- Lowest Common Multiple Worksheet
- Hcf And Lcm Formulas, Problems with Solutions

#### Chapter 4 Basic Geometrical Ideas

- Introduction
- Points, A Line Segment, Ray, and A Line
- Intersecting Lines and Parallel Lines
- Curves
- Types of Polygons
- What is Angle in Geometry
- Median, altitude of Triangle
- What is a Quadrilateral
- Parts of the Circle

#### Chapter 5 Understanding Elementary Shapes

• Introduction

- Comparison of Line Segments
- Different Types of Angles
- Measure an Angle with a Protractor
- Classification of Triangles
- Different Types of Quadrilaterals
- Different types of Three Dimensional Shapes

#### Chapter 6 Integers

- Introduction
- Integers Examples
- Operations with Integers Worksheet

#### **Chapter 7 Fractions**

- Introduction
- Types of fraction
- Fraction on The Number Line
- Proper Fractions
- Improper And Mixed Fractions
- Equivalent Fractions Chart
- Simplest Form Of A Fraction
- Like Fractions
- Comparing Fractions Worksheets
- Addition And Subtraction Of Fractions

#### Chapter 8 Decimals

- Introduction
- Tenths and Hundreths
- Convert Unlike Decimals to like decimals
- Using Decimals
- Addition Of Numbers With Decimals
- Subtraction Of Decimals

#### Chapter 9 Data Handling

- Introduction
- Recording Data
- Collection and Organisation of Data
- Pictograph Examples and Worksheets
- Interpretation of A Pictograph
- Drawing A Pictograph
- A Bar Graph

#### Chapter 10 Mensuration

- Introduction
- Perimeter of Closed Shapes
- Find Area of Plane Figures

#### Chapter 11 Algebra

- Introduction
- Matchstick Patterns
- The Idea Of A Variable
- More Matchstick Patterns
- More Examples Of Variables
- Use Of Variables In Common Rules
- Expressions With Variables
- Using Expressions Practically
- What Is An Equation?
- Solution Of An Equation

#### Chapter 12 Ratio and Proportion

- Introduction
- What is Ratio and Proportion
- Unitary Method

#### Chapter 13 Ratio and Proportion

- Introduction
- Making Symmetric Figures: Ink-blot Devils
- Figures with Two Lines of Symmetry
- Figures with Multiple (more than two) Lines of Symmetry
- Reflection and Symmetry

#### Chapter 14 Practical Geometry

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- Introduction
- Construction of a Circle
- Construction of a Line Segment
- Construction of a Perpendicular Bisector
- Construction of Angles using compass ruler