

## Math Grade 7

### 1. Whole Numbers

- 1.1 Determining Place Values in Whole Numbers
- 1.2 Comparing Whole Numbers
- 1.3 Properties of Whole Numbers
- 1.4 Rounding Whole Numbers
- 1.5 Patterns in Whole Numbers
- 1.6 Translating Statements of Inequality

### 2. Factors and Multiples

- 2.1 Prime and Composite Numbers
- 2.2 Prime Factorization
- 2.3 Highest Common Factor
- 2.4 Multiples and LCM
- 2.5 Power and Index

### 3. Fractions

- 3.1 Introduction to Fractions
- 3.2 Converting Improper Fractions to Mixed Fractions and vice-versa
- 3.3 Reducing Fractions to Lowest Terms
- 3.4 Building Equivalent Fractions
- 3.5 Finding the Missing part of Equivalent Fractions
- 3.6 Comparing and Listing Fractions in Order
- 3.7 Adding Fractions
- 3.8 Adding Mixed Fractions
- 3.9 Subtracting Fractions
- 3.10 Subtracting Mixed Fractions
- 3.11 Multiplication of Fractions
- 3.12 Division of Fractions

### 4. Percents

- 4.1 Understanding Percents
- 4.2 Problems on Percentage

### 5. Decimals

- 5.1 Determining Place Values in Decimals
- 5.2 Listing Decimals in Order
- 5.3 Addition and Subtraction of Decimals

5.4 Multiplication and Division of Decimals

5.5 Rounding Decimals

5.6 Converting Fractions to Percents and Vice-Versa

5.7 Converting Decimals to Fractions and Vice-versa

5.8 Converting Decimals to Percents and Vice-versa

## **6. Sets**

6.1 Sets and Set Notations

6.2 Types of Sets

6.3 Subsets

6.4 Operations on Sets

6.5 Venn Diagrams

## **7. Measurement**

7.1 Units- Weight, Length, Volume

7.2 Multiplying and Dividing Measurements by Numbers

7.3 Adding and Subtracting Measurements

## **8. Perimeter and Area**

8.1 Perimeter: Rectangle, Square and Equilateral t...

8.2 Area: Rectangle and Square

8.3 Area of Triangle

## **9. Time and Temperature**

9.1 Time

9.2 Convert Temperatures from Celsius to Fahrenheit

## **10. Visualising Solid Shapes**

10.1 Three Dimensional Shapes

10.2 Drawing Solids on Flat Surface

10.3 Viewing Solids

## **11. Basic Geometrical Ideas**

11.1 Geometry Terminology

11.2 Geometrical Shapes

11.3 Measuring Line Segments

11.4 Types of Angles and Measuring Angles

## **12. Polygons**

- 12.1 Introduction
- 12.2 Classification of Triangle
- 12.3 Properties of Triangles

## **13. Circle**

- 13.1 Circle and its Associated Terms
- 13.2 Constructing Circle when Radius is given

## **14. Algebra**

- 14.1 Translate Phrases and Statements into Expressions and Equations
- 14.2 Algebraic Expressions
- 14.3 Simplifying Algebraic Expressions
- 14.4 Evaluating Algebraic Expressions
- 14.5 Understanding Equations
- 14.6 Solving Equations
- 14.7 Solving Equations of the Type  $ax + b = c$
- 14.8 Applications of Linear Equation

## **15. Statistics and Probability**

- 15.1 Statistics
- 15.2 Probability

## **16. Additional Topics**

### **16.1 Number System**

- 16.1.1 Roman Numerals

### **16.2 Integers**

- 16.2.1 Introduction
- 16.2.2 Properties of Addition and Subtraction of Integers
- 16.2.3 Multiplication of Integers
- 16.2.4 Division of Integers

### **16.3 Congruent Triangles**

- 16.3.1 Introduction
- 16.3.2 Congruence of Triangles
- 16.3.3 Condition for Congruence of Triangles

## **16.4 Basic Geometry and Constructions**

16.4.1 Construction of Triangles

16.4.2 Transversal and Angle Pairs

16.4.3 Constructing Perpendicular and Perpendicular Bisector

16.4.4 Constructing Angle and Angle Bisector

16.4.5 Constructing Angles:  $60^\circ$ ,  $30^\circ$ ,  $120^\circ$ ,  $90^\circ$ ,  $45^\circ$

16.4.6 Construction of line parallel to given line

## **16.5 Algebra**

16.5.1 Factorisation by Grouping

16.5.2 Solving More Equations

16.6 Relations, Functions and Graphs

16.6.1 Relation

16.6.2 Function

16.6.3 Intervals and Their Graphs

16.6.4 Translating Statements of Inequality

## **16.7 Statistics**

16.7.1 Measure of Central Tendency