

Entrance Exam Required Material

Grade 8

Fractions, Decimals and Percents; Using the Percent Proportion, finding Percents Mentally
Percent of Change

Pre-Algebra

The Tools of Algebra

- Numbers and Expressions
- Variables and Expressions
- Variables and Equations
- Ordered Pairs and Relations
- Scatter Plots

Integers

- Integers and Absolute Value
- Adding ,Subtracting ,Multiplying, Dividing
- The Coordinate System

Equations

- The Distributive Property
- Simplifying Algebraic Expressions
- Solving Equations by Adding or Subtracting
- Solving Equations by Multiplying or Dividing
- Solving and writing Two-Step Equations
- Using Formulas

Factors and Fractions

- Factors and Monomials
- Powers and Exponents
- Prime Factorization
- Greatest Common Factor (GCF)
- Simplifying Algebraic Fractions
- Multiplying and Dividing Monomials
- Negative Exponents
- Scientific Notation

Rational Numbers

- Writing Fractions as Decimals
- Rational Numbers
- Multiplying and Dividing Rational Numbers
- Adding and Subtracting Like Fractions
- Least Common Multiple
- Adding and Subtracting Unlike Fractions
- Solving Equations with Rational Numbers

Ratio, Proportion and Percent

Ratios and Rates, Using Proportions, Scale

Equations and Linear Inequalities

Solving Equations with different methods

Functions and Graphing

Functions

Linear Equations in Two Variables

Graphing Linear Equations Using Intercepts
Slope

Rate of Change

Slope-Intercept Form

Writing Linear Equations

Solving Systems of Equations

Graphing Inequalities

Real Numbers and Right Triangles

Squares and Square Roots

The Real Number System

Angles

The Pythagorean Theorem

Similar Triangles and Indirect Measurement

Sine, Cosine, and Tangent Ratios

Three-Dimensional Figures

Three-Dimensional Figures

Volume: Prisms and Cylinders

Volume: Pyramids and Cones

Surface Area: Prisms and Cylinders

Surface Area: Pyramids and Cones

Similar Solids

Congruent Triangles

Classify Triangles

Angles of Triangles

Congruent Triangles

Relationships in Triangles

Bisectors of Triangles

Medians and Altitudes of Triangles

Circles

Circles and Circumference

Measuring Angles and Arcs

**English Entrance Exam
Grade 8**

Word Study

Syllabication

Spelling

Synonyms

Homophones

Capitalization & punctuation

Grammar

Sentence Structure

Reading comprehension