

Course            General Math  
Grade:            9  
Texts             Preliminary Mathematics – by Dressler, Amsco Publications ISCP  
ISCP by Houghton Mifflin  
RCT mathematics by West Sea

**1. Overall Objectives**

- a. To improve students computational skills.
- b. To prepare students for RCT examination.
- c. Have students understand basic concepts and principles of mathematics and to put these to use.

**II. Topics – Content**

- a. *Set of integers* (4 weeks)  
Addition, subtraction, multiplication, division of whole numbers (referred to four operations)  
Place value  
Rounding off  
Order of operations  
Inequalities order on number line  
Problem solving  
Four operations with integers – rules need in working with positive and negative numbers  
Prime and composite numbers  
Exponents
- b. *Rational numbers* (4 weeks)  
Four operations  
Number line – order  
Lowest common denominator  
Greatest common factor  
Mixed and improper fractions – changing  
Reducing fractions  
Equivalent fractions  
Problem solving  
Ruler – reading
- c. *Decimals*  
Four operations  
Changing fractions to decimals  
Repeating  $2^{\text{nd}}$  terminating decimals  
Rounding off  
Number line-order  
Problem solving  
Scientific notation
- d. *Measurement of geometric figures* (3 weeks)  
Identifying geometric figures  
Perimeter  
Area  
Volume

- e. *Percent (4 weeks)*  
 Definition  
 Changing percent to decimal, fraction, vice-versa  
 Finding rate, part, base  
 Word problems
- f. *Probability and statistics (2 weeks)*  
 Definition of probability  $P(E) = \frac{N(E)}{N(S)}$   
 Empirical probability  
 Theoretical probability  
 Experiments  
 Range of probability, 0-1  
 Organizing data into tables  
 Mean  
 Median  
 Mode  
 Range
- g. *Consumer and job related mathematics (3 weeks)*  
 Word problems on many topics  
 Banking  
 Commission  
 Discount  
 Insurance  
 Taxes  
 Home, automobile ownership  
 Discussion on these topics
- h. *Graphing (2 weeks)*  
 Number line-inequalities, order  
 Bar graphs  
 Line graphs  
 Reading various types of graphs  
 Coordinate graphing  
 Ordered pairs
- Metric system (2 weeks)*  
 Basic units  
 Prefixes  
 Facts  
 Demonstrations  
 Conversions

- j. *Geometry (2 weeks)*
  - Point, line, plane
  - Triangles-types, naming
  - Polygons-types, naming, properties
  - Parallel, perpendicular
  - Angles-naming, definitions
  - Circle
  - Angles-naming, definitions
  - Circle
  - Three dimensional figures
  
- k. *Ration and proportion (2 weeks)*
  - Definitions
  - Writing, reducing rations
  - Writing proportions, solving
  - Problem solving
  - Scale drawings
  - Comparisons  
  - Algebra (4 weeks)*
  - Meaning of variable
  - Like terms
  - Base, exponent, power
  - Four operations
  - Solving equations
  - Problem solving
  - Translating word sentences into mathematical symbols
  - Formulas
  
- m. *Review and testing (5 weeks)*
  - Each quarter
  - Extensive review at the end of the year to prepare students for RCT examination

For more information, refer to State Education Department booklet  
General High School Mathematics.