

# Hope Township School Mathematics

## Measurable Expectations

### Mission Statement

Hope Township School, in cooperation with our community, values the importance of a supportive, challenging education for all students delivered through an effective, contemporary curriculum that meets or exceeds the Common Core State Standards and the New Jersey Core Curriculum Content Standards. By fostering communication and respect in a positive educational environment, all children can realize their potential.

## 6th Grade

### Grade Level Goals:

- ◇ Express ratios and rates using ratio notation and language
- ◇ Determine unit rate from given rate or ratio
- ◇ Solve unit rate problems including those involving unit pricing and constant speed
- ◇ Change ratios to percents and vice versa
- ◇ Use ratios to convert measurements
- ◇ Determine if two ratios are equivalent and find equivalent ratios to given ratio
- ◇ Find the greatest common factor of two whole numbers  $<101$
- ◇ Find the least common multiple of two whole numbers  $<13$
- ◇ Use the distributive property to express a sum of two whole numbers with a common factor Ex:  $4(36) = 4(30) + 4(6)$
- ◇ Graph integers on a number line
- ◇ Graph positive and negative numbers on a number line
- ◇ Compare and order integers
- ◇ Understand the absolute value of a number
- ◇ Graph ordered pairs in all 4 quadrants on coordinate plane
- ◇ Find distance between two points with the same first coordinate or the same second coordinate
- ◇ Write and evaluate numerical expressions involving whole-number exponents
- ◇ Translate word phrases to variable expressions with one operation
- ◇ Evaluate variable expressions for given value
- ◇ Evaluate formulas used in real-world problems.
- ◇ Identify parts of a variable expression using mathematical terms (term, coefficient, variable)
- ◇ Simplify variable expressions by combining like terms
- ◇ Create and solve one-step variable equations or inequalities
- ◇ Use variables to represent two quantities in a real-world problem that change in relationship to one another; write an equation to express one quantity, as the dependent variable in terms of the other quantity as the independent variable.
- ◇ Analyze the relationship between the dependent and independent variables using graphs and tables and relate to an equation.
- ◇ Find perimeter and area of 2-D shapes including those shapes formed by combining known shapes
- ◇ Find volume of rectangular prisms using formulas
- ◇ Graph vertices of polygons on coordinate plane to find side lengths
- ◇ Represent three-dimensional figures using nets made up of rectangles, circles, and triangles
- ◇ Find surface area of prisms
- ◇ Display numerical data in plots on a number line, including dot plots, histograms, and box-and-whisker plots.
- ◇ Summarize and describe numerical data using measures of central tendency and variability.
- ◇ Understand that a set of data collected to answer a statistical question has a distribution which can be described by its center, spread, and overall shape.
- ◇ Find probability of single event

## Mental Math

- ◇ Find  $\frac{1}{2}$  of any whole number up to 100
- ◇ Add and subtract fractions with like denominators
- ◇ Add whole number and decimals
- ◇ Add whole number and fraction or mixed number
- ◇ Subtract whole number from mixed number
- ◇ Subtract whole number from decimal
- ◇ Multiply and Divide decimals by power of 10
- ◇ Find fractional part of whole numbers that are a multiple of the denominator of fraction. Ex:  $\frac{1}{3}$  of 33 = 11
- ◇ Find 10%, 25%, 50% of compatible whole numbers
- ◇ Convert common percents (10%, 50%, 25%, 75%, 100%, 33.33%) to fraction and decimal equivalents

## Computation skills (with Pen and paper)

- ◇ Fluently add, subtract, multiply, and divide decimals up to millionths.
- ◇ Multiply and Divide fractions by fractions
- ◇ Find whole number percent of a number

### Common Core Standards 6th Grade Overview:

- Ratios and Proportional Relationships
- The Number System
- Expressions and Equations
- Geometry
- Statistics and Probability
- Mathematical Practices