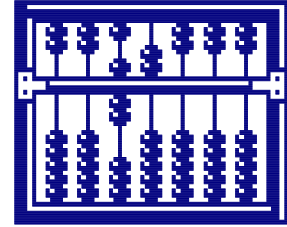




# Power Standards Math 7

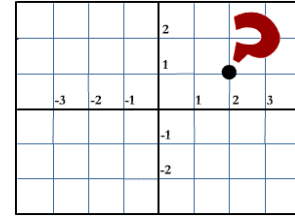


By the end of the year each student will...

- Use exponents and scientific notation
- Use ratios, proportions and percents
- Use integer operations
- Graph using coordinates
- Solve one and two step equations
- Demonstrate commutative, associative, distributive, and identities properties
- Know geometric concepts including; classification, transformation, symmetry, and measurement
- Determine area, perimeter, and volume
- Interpret, analyze and predict data
- Establish probability
- Substitute variables in a formula
- Demonstrate calculator skills of exponents, fractions, and square roots
- Know number theory including; prime factorization, order of operations, LCM, and GCF
- Apply and convert both customary and metric units
- Explore and extend patterns and sequences

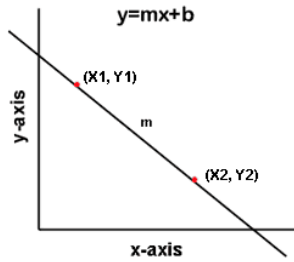


# Power Standards Pre-Algebra



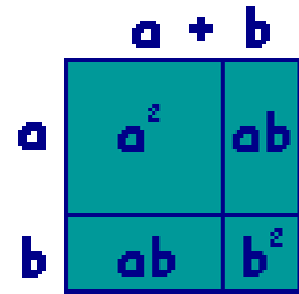
By the end of the year each student will...

- Demonstrate basic graphing calculator skills
- Use integer operations
- Approximate square roots, perfect squares, and scientific notation
- Identify slopes given graph and table
- Estimate using Metric and Standard systems
- Show proportional reasoning
- Apply and solve proportions for similar shapes and scale drawings
- Classify two & three dimensional objects, and calculate area, surface area, and volume
- Collect, organize, predict, and calculate central tendencies of data list, tables, charts, and graphs
- Approximate and compare probabilities (theoretical and experimental)
- Solve two step equations and inequalities
- Graph using coordinates
- Demonstrate order of operations
- Substitute variables in a formulas and check work
- Use rational numbers including; percents, decimals, and fractions

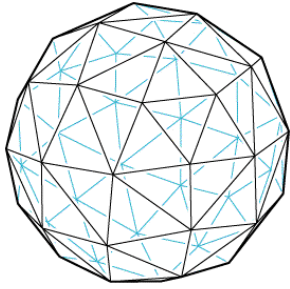


# Power Standards Algebra

By the end of the year each student will...

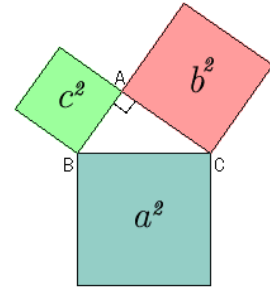


- Simplify square roots
- Use and manipulate coordinate formulas (distance, mid-point, and slope)
- Solve for x, y, and z (manipulating equations)
- Know and apply Pythagorean Theorem
- Demonstrate graphic calculator skills of lines, slopes, intercepts, and scatter plots
- Solve systems of two inequalities, two linear equations
- Solve area models of factoring binomial, polynomial multiplication and combining like terms
- Set up and solve multi-step equations and inequalities including equations with variable on both sides
- Write an equation of a line using various forms
- Show slope as a rate of change
- Use slope intercept form to determine slope, intercepts and equations of a line
- Graph lines from different forms
- Use polynomial operations of like terms, distributive property, simplify, and FOIL
- Solve equations using exponents and roots
- Apply probability



# Power Standards Geometry

By the end of the year each student will...



- Know everything there is to know about triangles
- Use and apply Pythagorean Theorem to right triangles
- Understand basic proof and organization of proof for congruent triangles, similar triangles, and coordinate geometry
- Solve equations using right triangle trigonometry
- Know the classifications and properties of quadrilaterals
- Classify and apply Algebra to polygon properties
- Demonstrate proportional reasoning for similar shapes, area of similar shapes, and volumes of similar solids
- Demonstrate transformation (translation, rotation, reflection, and dilation)
- Apply Algebra to the properties of circles
- Classify geometric solids, their nets, and cross sections
- Calculate area, surface area, and volume
- Use geometric dynamic software
- Demonstrate geometric probabilities
- Show coordinate geometry (distance, mid-point, and slope)
- Understand angle relationships