

# What am I going to learn in 6<sup>th</sup> grade Math?

## 1<sup>st</sup> Quarter:

- Divide fractions by fractions
  - Understand what it means
  - Make a visual model
  - Solve problems with multiple steps
  - Lots of practice with story problems
- Understand positive and negative numbers
  - Opposites
  - Absolute value on number lines
  - Comparing and ordering
  - Lots of practice with story problems
- Distributive Property—(you're learning Algebra now!)
  - Multiply with groups of things like 2 times (  $6 + 3x$  )
  - Lots of practice with story problems

If there's extra time—review DECIMALS—add, subtract, multiply, and divide with them!

## 2<sup>nd</sup> Quarter:

- Positive and Negative numbers on the Graph
  - 4 quadrant graphs
  - Ordered pairs
  - Make shapes on a graph
  - Story problem practice
- Ratios and Rates
  - Understand what it means
  - Unit rate
  - Make tables
  - Lots of practice with story problems

If there's extra time—keep working on DECIMALS—add, subtract, multiply, divide!

## What am I going to Learn in 6<sup>th</sup> Grade Math...continued....

### 3<sup>rd</sup> Quarter:

- Write and Understand Expressions and Equations
  - Solve problems when letters stand for numbers
  - Write problems in different ways
  - Solve one step equations using add/subtract/multiply/or divide
  - Solve inequalities in one step
  - Lots of story problem practice
- Find Percents out of 100
  - Find the percent when you know the whole amount
  - Find the whole amount when you know the percent
  - Lots of story problems practice

### 4<sup>th</sup> Quarter:

- Area, Surface Area, and Volume of Shapes
  - Areas of triangles, quadrilaterals, and other shapes
  - Volume of rectangular prisms
  - Make nets of shapes to find the total surface area
  - Lots of story problems practice

If there's time:

- Collect data and use it to make
  - Histograms, box plots, number lines
- Understand mean and median

What Can I Practice During the SUMMER to get ready?

- ✓ Multiplication facts
- ✓ Adding, Subtracting, and Multiplying Fractions
- ✓ Remembering factors and Multiples
- ✓ Place value—tenths, hundredths, thousandths
- ✓ Changing decimals to fractions
- ✓ Add, Subtract, Multiply and Divide Decimals
- ✓ Long Division

# What am I going to learn in 7<sup>th</sup> grade Math?

## 1<sup>st</sup> Quarter:

- Add, Subtract, Multiply, Divide with ALL Rational Numbers
  - Positives and negatives
  - Fractions
  - Decimals
  - Lots of story problems
- Understand and Write Expressions in Different Ways
  - Use percents and decimals
  - Use fractions and decimals
  - Lots of story problem practice

## 2<sup>nd</sup> Quarter:

- Understand Proportions and use them to Solve Problems
  - Recognize equal proportions
  - Represent proportions using equations
  - Use unit rates to graph the proportion
  - Lots of story problems
- Write and Solve Real-Life Equations and Expressions
  - Multi-step problems from a story
  - Interpreting and writing equations

If there's time, use geometric shapes to understand proportions through scale models.

## What am I going to learn in 7<sup>th</sup> grade Math...continued....

### 3<sup>rd</sup> Quarter:

- Solve Inequalities
  - Multi-step problems
  - Graph solutions on a number line
  - Lots of story problems
- Draw and Describe Geometric Figures
  - Draw triangles and quadrilaterals with specific angles or side lengths
  - Describe what slicing a 3D figure looks like
- Area, Circumference, Surface Area, and Volume
  - Triangles, quadrilaterals, circles, cubes, and prisms
- Understand angle vocabulary and solve problems with them
  - Find unknown measures by using relationships like adjacent, vertical, and supplementary angles

### 4<sup>th</sup> Quarter:

- Use Random Sampling to Draw Inferences
  - What does it mean?
  - What data?
- Compare Data Sets
  - Use mean and median to describe the relationship
  - See how they overlap and how they don't
- Compute the probability of something happening
  - Multiple things happening
  - Make tables, lists, and tree diagrams

What Can I Practice During the SUMMER to get ready?

- ✓ Adding, Subtracting, Multiplying, and Dividing Fractions
- ✓ Changing Decimals to Fractions
- ✓ Add, Subtract, Multiply and Divide Decimals
- ✓ Solving One-Step Equations

# What am I going to learn in 8<sup>th</sup> grade Math?

## 1<sup>st</sup> Quarter:

- Understand Radicals and Exponents
  - Laws of exponents
  - Square and cube roots, perfect squares and cubes
  - Scientific notation
  - Lots of story problem practice
- Triangles and the Pythagorean Theorem
  - Understand angles in a triangle
  - Apply the Pythagorean Theorem to find missing lengths
  - LOTS of story problem practice

If there's time, understand rational vs. irrational numbers and compare them using number lines.

## 2<sup>nd</sup> Quarter:

- Define, Solve, and Compare Linear Functions
  - Use tables, graphs, equations, and written descriptions to compare
  - Understand slope and y-intercept
  - Understand what it means when 2 lines intersect
  - Describe functions by their graph or sketch a graph that represents it

This quarter may seem short, but this one unit is VERY IMPORTANT for 9<sup>th</sup> Algebra.

## 3<sup>rd</sup> Quarter:

- Solving Systems of Equations
  - Solve algebraically using elimination or substitution
  - Solve by graphing
  - Lots of story problem practice
- Geometric Transformations
  - Understand rotations, reflections, and translations as congruent
  - Graph transformations, including dilations
  - Understand interior and exterior angles

#### 4<sup>th</sup> Quarter:

- MORE Linear Relationships
  - Continue solving multi-step equations
  - Continue solving systems of equations
  - Continue graphing linear functions

What Can I Practice During the SUMMER to get ready?

- ✓ Multiplying, and Dividing Fractions
- ✓ Changing Decimals to Fractions to Percents
- ✓ Add, Subtract, Multiply and Divide Decimals
- ✓ Solving Two-Step Equations
- ✓ Order of Operations (PEMDAS)