

7th Grade Common Core Math Curriculum Unit 1

Time	Standard	The Student Will Be Able To:	Resources
	7NS1	<p>Represent positive and negative rational numbers on a number line.</p> <p>Represent addition and subtraction of positive and negative rational numbers on a number line and with models.</p> <p>Define absolute value as a distance from zero.</p> <p>Demonstrate that subtraction is a distance between numbers.</p> <p>Apply properties of addition and subtraction of rational numbers in real world context.</p>	<p>MARS Activity: Sequences</p>
	7NS2	<p>Apply previous understanding of multiplication and division of positive rational numbers to include negative values.</p> <p>Interpret products and quotients in real world context.</p> <p>Convert fractions to decimals, and decimals to fractions by hand.</p> <p>Understand that there are terminating and repeating decimals and their notation.</p>	<p>MARS Activity: Rainfall Leaky Faucet Quiz Pedro's Tables Cat Food</p>
	7NS3	<p>Solve real world problems involving the four operations with rational numbers.</p> <p>Real world computations with complex fractions.</p>	

7th Grade Common Core Math Curriculum Unit 2

Time	Standard	The Student Will Be Able To:	Resources
	7RP1	<p>Compute unit rates with ratios of fractions, including lengths, areas, and other quantities measured in like and unlike units.</p> <p>Example: A person walks $\frac{1}{2}$ mile in each $\frac{1}{4}$ hour.</p>	<p>MARS Activity: A Million Dollars</p>
	7RP2	<p>Recognize and represent proportional relationships.</p> <p>Use tables, graphs, and equivalency to represent proportional relationships.</p> <p>Identify unit rates in tables, graphs, equations, diagrams, and descriptions.</p> <p>Represent proportional relationships with equations.</p> <p>Explain the meaning of graphed points.</p> <p>Example: $(0,0)$ is the origin and $(1,r)$ where r is the unit rate (slope).</p>	<p>MARS Activity: European Trip Lawn Mowing Buses</p>
	7RP3	<p>Use proportional relationships to solve multi-step ratio and percent problems. I.e. simple interest, tax, percent increase and percent decrease.</p>	<p>FAL: Increasing and Decreasing Quantities by a Percent MARS Assessment: Buying a Camera Yogurt MARS Activity: Population Mixing Paints Cereal Special Offer Sneakers Work Percents Sale!</p>

7th Grade Common Core Math Curriculum Unit 3

Time	Standard	The Student Will Be Able To:	Resources
	7G1	Solve problems involving scale drawings, including computing actual lengths and reproducing a drawing with a different scale.	
	7G2	Draw geometric shapes with given conditions. Focus on triangles. Notice when conditions given form unique triangles, more than one triangle, or no triangle.	
	7G3	Describe the 2-D figures that make up 3-D figures. Identify attributes of the 2-D figures that make up the 3-D figures.	FAL: Using Dimensions: Designing a Sports Bag
	7G4	Use formulas for area and circumference of a circle to solve problems.	MARS Activity: Picture Frame Which is Bigger? Pizza Crusts Winter Hat

7th Grade Common Core Math Curriculum Unit 4

Time	Standard	The Student Will Be Able To:	Resources
	7EE1	Use properties of operations to combine like terms.	
		Use distributive property to factor and expand.	
	7EE2	Write expressions in different forms and choose appropriate form to solve given problem. Example: $a + 0.05a = 1.05a$ "Increase by 5%" "Multiply by 1.05"	
	7EE3	Solve real world multi-step problems with positive and negative rational numbers. Assess the reasonableness of answers.	FAL: Using Positive and Negative Numbers in Context
	7EE4	Use variables to write equations and inequalities to solve real world and mathematical problems. Use substitution to solve for given variables in formulas.	FAL: Steps to Solving Equations MARS Assessment: Hexagons MARS Activity: Baseball Jerseys Cooking Square Spirals Fence Cups Mystery Letters Necklaces

7th Grade Common Core Math Curriculum Unit 5

Time	Standard	The Student Will Be Able To:	Resources
	7G2	Understand properties of triangles. i.e. side lengths $a + b$ is $> c$, angles $a + b + c = 180$	FAL: Applying Angle Theorems
		Identify angle relationships in parallel lines with a transversal. Example: supplementary, complimentary, adjacent, and vertical.	
	7G5	Use angle relationships to write and solve equations for unknown angles.	
	7G6	Solve real world and mathematical problems involving area, volume, and surface area of 2-D and 3-D figures.	FAL: Estimations and Approximations: The Money Munchers Maximizing Area: Gold Rush MARS Activity: Wallpaper Boxes Tiling a Floor Flag Parallelogram
	7EE3	Use tools and conversions appropriately when finding the area, surface area, or volume of figures.	

7th Grade Common Core Math Curriculum Unit 6

Time	Standard	The Student Will Be Able To:	Resources
	7SP1	Make generalizations about a population from a sample.	FAL: Estimating: Counting Trees
		Understand when a sample is valid. (Biased vs. Unbiased)	
	7SP2	Use random samples to make predictions about populations.	
	7SP3	Compare the same characteristic on two or more sets of data. Example: Height for basketball team and height for soccer team.	FAL: Evaluating Statements About Probability
	7SP4	Use mean, median, and mode to make inferences about two sets of data. Example: Word length in a 7th grade book vs. word length in a 4th grade book.	
	7SP5	Understand probabilities must be between 0 and 1. Determine the likely hood of an event occurring. 0 = never 1/2 = equally likely 1 = will always happen	
	7SP6	Understand theoretical vs. experimental probability and compare the outcomes.	MARS Activity: Jo's Machines
	7SP7	Develop a probability model and use it to find probability of events.	MARS Activity: Black and White Card Game Activity Day A Board Game Memory Game Winning Spinners School Days Spinners Duck Game Pick a Cube

	Choosing a Cube Will it Happen?
	Compare the theoretical to experimental in model and explain discrepancies.
7SP7a	Develop a probability model, assign equal probability to outcomes, and use model to determine probabilities.
7SP7b	Develop a probability model, assign unequal probability to outcomes, and use model to determine probabilities.
7SP8	Find probability of compound events using organized lists, tables, tree diagrams, and simulations.
7SP8a	Understand that probability of a compound event is a fraction of the outcomes in the sample space.
7SP8b	Represent sample spaces using lists, tables, and tree diagrams.
7SP8c	Design and use simulations to generate frequencies for compound events.
	MARS Assessment: Fair Game? MARS Activity: Dice Game