

8th Grade Pacing Guide

| 8TH GRADE STANDARDS | | GP 1 | GP 2 | GP 3 | GP 4 | GP 5 | GP 6 |
|---------------------|--|----------|------|----------|------|----------|------|
| 8.1.1 | Read, write, compare, and solve problems using decimals in scientific notation. | | | | | X | |
| 8.1.4 | Understand and evaluate negative integer exponents. | | | | | X | |
| 8.1.5 | Use law of exponents for integer exponents. | | | | | X | |
| 8.1.6 | Use the inverse relationship between squaring and finding the square root of a perfect square integer. | | | | | X | |
| 8.1.7 | Calculate and find approximations of square roots. | | | | | X | |
| 8.2.1 | 8.2.1 Add, subtract, multiply, and divide rational numbers (integers, fractions, and terminating decimals) in multi-step problems. Example: $-3.4 + 2.8 \times 5.75 = ?$, $145 + -38 \times 229 = ?$, $81.04 \div 17.4 - 2.79 = ?$. | X | | | | | |
| 8.3.1 | 8.3.1 Write and solve linear equations and inequalities in one variable, interpret the solution or solutions in their context, and verify the reasonableness of the results. Example: As a salesperson, you are paid \$50 per week plus \$3 per sale. This week you want your pay to be least \$100. Write an inequality for the number of sales you need to make, solve it, and check that your answer is reasonable. | X | | | | | |
| 8.3.2 | Solve systems of two linear equations using substitution method and identify approximate solutions graphically. | | | X | | | |

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| 8.3.3 | Interpret positive integer powers as repeated multiplication and negative integer powers a repeated division or multiplication by the multiplicative inverse. | | | | | X | |
| 8.3.4 | values of algebraic expressions involving powers. Example: Use a scientific calculator to find the value of $3(2x + 5)^2$ when $x = -35$. | X | | | | | |
| 8.3.5 | 8.3.5 Identify and graph linear functions and identify lines with positive and negative slope. Example: Draw the graphs of $y = 2x - 1$, $y = 3x - 1$, $y = -2x - 1$, and $y = -3x - 1$. Find the slope of each graph. What do you | | | X | | | |
| 8.3.6 | 8.3.6 Find the slope of a linear function given the equation and write the equation of a line given the slope and any point on the line. Example: Write an equation of the line with slope 2 and y-intercept -4. | | | X | | | |
| 8.3.7 | 8.3.7 Demonstrate an understanding of rate as a measure of one quantity with respect to another quantity. Example: A car moving at a constant speed travels 90 km in 2 hours, 135 km in 3 hours, 180 km in 4 hours, etc. Draw a graph of distance as a function of | | | X | | | |
| 8.3.8 | 8.3.8 Demonstrate an understanding of the relationships among tables, equations, verbal expressions, and graphs of linear functions. Example: Write an equation that represents the verbal description: "the perimeter of a square is four times the side length." Construct a table of values for this | | | X | X | | |
| 8.4.5 | to solve problems in two and three dimensions. Example: Measure the dimensions of a shoe box and calculate the length of a diagonal from the top right to the bottom left of the box. Measure with a string to evaluate your solution. | | | | X | X | |
| 8.5.2 | 8.5.2 Solve simple problems involving rates and derived measurements for attributes such as velocity and density. Example: A car travels at 60 mph for 20 minutes. How far does it travel? What units are appropriate for distance? Explain your answer. | | X | | | | |

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| 8.5.4 | 8.5.4 Use formulas for finding the perimeter and area of basic two-dimensional shapes and the surface area and volume of basic three-dimensional shapes, including rectangles, parallelograms, trapezoids, triangles, circles, prisms, cylinders, spheres, cones, and pyramids. Example: Find the total surface area of a right triangular prism 14 feet high and with a base | | | | | X | |
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| CCSS | | | | | | | |
| 8 EE.7 | 8.EE.7 Solve linear equations in one variable. | | | | | | X |
| 8 EE.5 | 8.EE.5 Graph proportional relationships, interpreting the unit rate as the slope of the graph. Compare two different proportional relationships represented in different ways. For example, compare a distance-time graph to a distance-time equation to determine which of two moving objects has greater speed. | | | | | | X |
| 8 F.2 | 8.F.2 Compare properties of two functions each represented in a different way (algebraically, graphically, numerically in tables, or by verbal descriptions). For example, given a linear function represented by a table of values and a linear function represented by an algebraic expression, determine which function has the greater rate of change. | | | | | | X |

The *Standards for Mathematical Practice* describe varieties of expertise that mathematics educators at all levels should seek to develop in their students. These practices rest on important 'processes and proficiencies' with longstanding importance in mathematics education.

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1. Make sense of complex problems and persevere in solving them.
2. Reason abstractly and quantitatively
3. Construct viable arguments and critique the reasoning of others.
4. Model with mathematics.
5. Use appropriate tools strategically.
6. Attend to precision.
7. Look for and make use of structure.
8. Look for and express regularity in repeated reasoning.