

Any standard **highlighted in yellow** has been determined by our WCSD teachers, district and state experts as essential for students to master.

**Strand: I can work with radicals and integer exponents. (8.EE 1-4)**

**Strand: I can understand the connections between proportional relationships, lines, and linear equations. (8.EE 5-6)**

**Strand: I can analyze and solve linear equations and pairs of simultaneous linear equations. (8.EE.7-8)**

**Standard 8.EE.1: I know and can apply the properties of integer exponents to generate equivalent numerical expressions.**

Learning Targets	Academic Vocabulary & Notation	Question Stems	Possible Assessments
<ul style="list-style-type: none"> <li>I know the properties of integer exponents.</li> <li>I can apply the properties of integer exponents to simplify and evaluate numerical expressions.</li> </ul>	<ul style="list-style-type: none"> <li>base, exponent, reciprocal, integer, expression, power, factors, numerical expression, algebraic expression, monomial, variable, product of powers, quotient of powers, power of a power, power of a product, simplify, evaluate</li> </ul>	<ul style="list-style-type: none"> <li>What other math can you connect with this?</li> <li>This new math idea is like....</li> </ul>	<ul style="list-style-type: none"> <li><a href="#">District CFA Expressions/ Equations 1-4 Form A</a></li> <li><a href="#">District CFA Expressions/ Equations 1-4 Form B</a></li> <li><a href="#">District CFA Expressions/ Equations 1-4 GVC Form</a></li> </ul>

**Standard 8.EE.2: I can use square root and cube root symbols to represent solutions to equations of the form  $x^2 = p$  and  $x^3 = p$ , where  $p$  is a positive rational number.**

Learning Targets	Academic Vocabulary & Notation	Question Stems	Possible Assessments
<ul style="list-style-type: none"> <li>I can evaluate square roots of small perfect squares and cube roots of small perfect cubes.</li> <li>I can identify irrational numbers.</li> <li>I can convert either repeating or terminating decimals into a fraction.</li> </ul>	<ul style="list-style-type: none"> <li>square root, cube root, inverse operation, perfect square, perfect cube, radical, equation, solve, <math>\sqrt{\quad}</math>, <math>\sqrt[3]{\quad}</math></li> </ul>	<ul style="list-style-type: none"> <li>I solved the problem by....</li> <li>The steps I followed were....</li> </ul>	<ul style="list-style-type: none"> <li><a href="#">District CFA Expressions/ Equations 1-4 Form A</a></li> <li><a href="#">District CFA Expressions/ Equations 1-4 Form B</a></li> <li><a href="#">District CFA Expressions/ Equations 1-4 GVC Form</a></li> </ul>

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<b>Standard 8.EE.3: I can use numbers expressed in the form of a single digit times an integer power of 10 to estimate very large or very small quantities, and to express how many times as much one is than the other.</b>			
<p><b>Learning Targets</b></p> <ul style="list-style-type: none"> <li>I can estimate numbers as a product of a single digit and a power of ten.</li> <li>I can compare numbers expressed as a product of a single digit and a power of ten by a scale factor.</li> </ul>	<p><b>Academic Vocabulary &amp; Notation</b></p> <ul style="list-style-type: none"> <li>powers of ten, estimate, base 10, place value, digits</li> </ul>	<p><b>Question Stems</b></p> <ul style="list-style-type: none"> <li>I did something like this before when...</li> <li>What does this make you think of?</li> </ul>	<p><b>Possible Assessments</b></p> <ul style="list-style-type: none"> <li><a href="#">District CFA Expressions/Equations 1-4 Form A</a></li> <li><a href="#">District CFA Expressions/Equations 1-4 Form B</a></li> <li><a href="#">District CFA Expressions/Equations 1-4 GVC Form</a></li> </ul>
<b>Standard 8.EE.4: I can perform operations with numbers expressed in scientific notation, including problems where both decimal and scientific notation are used.</b>			
<p><b>Learning Targets</b></p> <ul style="list-style-type: none"> <li>I can use scientific notation and choose units of appropriate size for measurements of very large or very small quantities.</li> <li>I can convert between decimal notation and scientific notation.</li> <li>I can interpret numbers expressed in scientific notation, including numbers generated by technology.</li> </ul>	<p><b>Academic Vocabulary &amp; Notation</b></p> <ul style="list-style-type: none"> <li>scientific notation, decimal notation, power of ten, units of measure, standard form</li> </ul>	<p><b>Question Stems</b></p> <ul style="list-style-type: none"> <li>How these are different? The same?</li> <li>What questions arose as you worked?</li> </ul>	<p><b>Possible Assessments</b></p> <ul style="list-style-type: none"> <li><a href="#">District CFA Expressions/Equations 1-4 Form A</a></li> <li><a href="#">District CFA Expressions/Equations 1-4 Form B</a></li> <li><a href="#">District CFA Expressions/Equations 1-4 GVC Form</a></li> </ul>

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**Standard 8.EE.5: I can graph proportional relationships, interpreting the unit rate as the slope of the graph. I can compare two different proportional relationships represented in different ways.**

<b>Learning Targets</b>	<b>Academic Vocabulary &amp; Notation</b>	<b>Question Stems</b>	<b>Possible Assessments</b>
<ul style="list-style-type: none"> <li>• I can graph a proportional relationship given a table, equation, or contextual situation.</li> <li>• I can recognize unit rate as slope and interpret the meaning of a slope in context.</li> <li>• I can recognize that proportional relationships include the point (0,0)</li> <li>• I can compare different representations of two proportional relationships represented as contextual situations, graphs, or equations.</li> <li>• I can sketch a graph based on a verbal description.</li> <li>• I can give a verbal description based on a graph that demonstrates the function relationship between two quantities.</li> </ul>	<ul style="list-style-type: none"> <li>• slope, unit rate, rate of change, m (slope)</li> </ul>	<ul style="list-style-type: none"> <li>• What other math can you connect to this?</li> <li>• I thought of.....</li> </ul>	<ul style="list-style-type: none"> <li>• <a href="#">District CFA Expressions/Equations 5-6 Form A</a></li> <li>• <a href="#">District CFA Expressions/Equations 5-6 Form B</a></li> </ul>

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**Standard 8.EE.6: I can use similar triangles to explain why the slope  $m$  is the same between any two distinct points on a non-vertical line in the coordinate plane; derive the equation  $y=mx+b$  for a line through the origin and the equation  $y=mx+b$  for a line intercepting the vertical axis at  $b$ .**

<b>Learning Targets</b>	<b>Academic Vocabulary &amp; Notation</b>	<b>Question Stems</b>	<b>Possible Assessments</b>
<ul style="list-style-type: none"> <li>• I can determine the slope of a line as the ratio of the leg lengths of similar right triangles.</li> <li>• I can explain why the slope is the same between any two distinct points on a line using similar right triangles.</li> <li>• I can write an equation in the form <math>y=mx+b</math> from a graph of a line on the coordinate plane.</li> </ul>	<ul style="list-style-type: none"> <li>• similar triangles, <math>m</math>(slope), <math>b</math>(<math>y</math>-intercept), linear, right triangle, origin, rise, run, transformation, equation of a line, coordinate plane, intercept, <math>y</math>-intercept, <math>x</math>-intercept, slope-intercept form</li> </ul>	<ul style="list-style-type: none"> <li>• How can you relate this to real-life?</li> <li>• What else would you like to find out about.....?</li> </ul>	<ul style="list-style-type: none"> <li>• <a href="#"><u>District CFA Expressions/Equations 5-6 Form A</u></a></li> <li>• <a href="#"><u>District CFA Expressions/Equations 5-6 Form B</u></a></li> </ul>

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**Standard 8.EE.7: I can solve linear equations in one variable.**

<b>Learning Targets</b>	<b>Academic Vocabulary &amp; Notation</b>	<b>Question Stems</b>	<b>Possible Assessments</b>
<ul style="list-style-type: none"> <li>• I can give examples of linear equations in one variable with one solution, infinitely many solutions, or no solutions.</li> <li>• I can solve linear equations with rational number coefficients, including equations whose solutions require expanding expressions using the distributive property and collecting like terms.</li> <li>• I can solve multi-step linear equations with rational coefficients and variables on both sides.</li> <li>• I can solve for a given variable in terms of another variable.</li> </ul>	<ul style="list-style-type: none"> <li>• solve, variable, order of operations, solution, like terms, distributive property</li> </ul>	<ul style="list-style-type: none"> <li>• What decisions can you make from the pattern that you discovered?</li> <li>• What were the steps involved?</li> </ul>	<ul style="list-style-type: none"> <li>• <a href="#">District CFA Expressions/Equations 7 Form A</a></li> <li>• <a href="#">District CFA Expressions/Equations 7 Form B</a></li> <li>• <a href="#">District CFA Expressions/Equations 7 Form C</a></li> <li>• <a href="#">District CFA Expressions/Equations GVC Form</a></li> </ul>

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**Standard 8.EE.8 I can analyze and solve pairs of simultaneous linear equations.**

<b>Learning Targets</b>	<b>Academic Vocabulary &amp; Notation</b>	<b>Question Stems</b>	<b>Possible Assessment</b>
<ul style="list-style-type: none"> <li>• I understand that solutions to a system of two linear equations in two variables correspond to points of intersection of their graphs, because points of intersection satisfy both equations simultaneously.</li> <li>• I can solve systems of two linear equations in two variables algebraically and estimate solutions by graphing the equations.</li> <li>• I can solve real-world and mathematical problems leading to two linear equations in two variables.</li> <li>• I can estimate solutions by graphing systems of equations (focus on slope-intercept form)</li> </ul>	<ul style="list-style-type: none"> <li>• elimination, substitution, solution, intersection, solve, system of linear equations, infinitely many solutions, coefficient, equation, distributive property, like terms</li> </ul>	<ul style="list-style-type: none"> <li>• I did something like this before when....</li> <li>• How do you know?</li> <li>• What changes did you have to make to solve the problem?</li> </ul>	<ul style="list-style-type: none"> <li>• <a href="#">District CFA Expressions/Equations Form A</a></li> <li>• <a href="#">District CFA Expressions/Equations GVC Form</a></li> </ul>