

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

<p><b>Strand 10.A.SSE.1-3: I can interpret the structure of expressions (Standards A.SSE.1-2). I can write expressions in equivalent forms to solve problems, balancing conceptual understanding and procedural fluency in work with equivalent expressions (Standard A.SSE.3)</b></p>			
<p><b>Standard 10.A.SSE.1: I can interpret quadratic and exponential expressions that represent a quantity in terms of its context.</b></p>			
<p><b>Learning Targets</b></p> <ul style="list-style-type: none"> <li>I can interpret a quadratic expression that represents a quantity in terms of its context.</li> <li>I can interpret an exponential expression that represents a quantity in terms of its context.</li> </ul>	<p><b>Academic Vocabulary &amp; Notation</b></p> <ul style="list-style-type: none"> <li>quadratic, expression, quantity, context, exponential, law of exponents,</li> </ul>	<p><b>Question Stems</b></p> <ul style="list-style-type: none"> <li>How are these _____ the same? different?</li> <li>How have you shown your thinking (e.g. picture, model, numbers, sentence)</li> </ul>	<p><b>Possible Assessments</b></p> <ul style="list-style-type: none"> <li><u>District CFAs</u></li> </ul>
<p><b>Standard 10.A.SSE.2: I can use the structure of an expression to identify ways to rewrite it.</b></p>			
<p><b>Learning Targets</b></p> <ul style="list-style-type: none"> <li>I can apply structure from previous courses to an expression. For example, see <math>x^4 - y^4</math> as <math>(x^2)^2 - (y^2)^2</math></li> <li>I can rewrite expressions to help solve.</li> </ul>	<p><b>Academic Vocabulary &amp; Notation</b></p> <ul style="list-style-type: none"> <li>quadratic, expression, quantity, context, exponential, law of exponents, structure</li> </ul>	<p><b>Question Stems</b></p> <ul style="list-style-type: none"> <li>I could make this clearer by using _____ because _____.</li> <li>Justify your answer</li> </ul>	<p><b>Possible Assessments</b></p> <ul style="list-style-type: none"> <li><u>District CFAs</u></li> </ul>

**Standard 10.A.SSE.3: I can choose and produce an equivalent form of an expression to reveal and explain properties of the quantity represented by the expression.**

<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 factor a quadratic expression to reveal the zeros of the function it defines.</li> <li>I can complete the square in a quadratic expression to reveal the maximum or minimum value of the function it defines. (Note: development of skill in factoring and completing the square goes hand in hand with understanding what different forms of a quadratic expression reveal).</li> <li>I can use the properties of exponents to transform expressions for exponential functions. For example, the expression <math>1.15^t</math> can be rewritten as <math>(1.15^{1/12})^{12t} \approx 1.012^{12t}</math> to reveal the approximate equivalent monthly interest rate if the annual rate is 15%.</li> </ul>	<ul style="list-style-type: none"> <li>quadratic expression, function, complete the square, maximum, minimum, properties of exponents, transform expressions, equivalent, monthly interest rate, annual rate, radicals, complex numbers, solve, factor, discriminant</li> </ul>	<ul style="list-style-type: none"> <li>How have you shown your thinking?</li> <li>What questions arose as you worked?</li> <li>Solve the quadratic equation <math>49x^2 - 70x + 37 = 0</math> using two methods. Describe the advantage of each method.</li> </ul>	<ul style="list-style-type: none"> <li><u>District CFAs</u></li> </ul>