

**MPM 2D Learning Goals & Success Criteria**  
**Chapter 5: Applying Quadratic Models**

<b>Learning Goals</b>	
I will be able to: <ul style="list-style-type: none"> <li>• Transform the graph of <math>y = x^2</math> when given an equation in standard, factored, or vertex form (QR2).</li> <li>• Apply my understanding of quadratic relations to a variety of problem solving situations (QR4).</li> </ul>	
<b>Success Criteria</b>	
I can: <ul style="list-style-type: none"> <li>• Identify, through investigation, the role of a, h, and k in transforming the graph of <math>y = x^2</math>.</li> <li>• Explain the roles of a, h, and k using the appropriate terminology to describe transformations, and identify the vertex and the equation of the axis of symmetry.</li> <li>• Graph, by hand, <math>y = a(x - h)^2 + k</math> by applying transformations to the graph of <math>y = x^2</math>.</li> <li>• Determine an equation of a parabola in vertex form given it's graph, a list of transformation, or points on the graph.</li> <li>• Solve problems arising from real life situations that can be modeled by quadratic relations.</li> </ul>	
<b>Test Information:</b>	
Your test is Tuesday, May 26 <sup>th</sup> . You have from 11:00 until 12:40 to complete it (class plus 20 minutes of lunch). It should not take more than 75 minutes, but the extra time is there to accommodate technical difficulties, checking work, etc.). Detailed information is below. There will be two parts again, with part one being online and part two being written.	
There is a more detailed test outline below. Please refer to that while you study. To prepare for assessments effectively: <ul style="list-style-type: none"> <li>• Review your notes while you review the video lessons for the chapter. Complete some form of review organizer/study note. Try to connect the learning goals and success criteria to specific types of questions!!</li> <li>• Read the feedback on your quizzes and redo the questions on them (even if you got it right!)</li> <li>• Complete questions in the suggested review or homework that you feel that you need to do.</li> </ul>	
<b>Questions to Expect</b>	<b>Part 1 (ONLINE)</b> <ul style="list-style-type: none"> <li>• 5 to 7 multiple choice questions (QR2) where you will need to be able to: <ul style="list-style-type: none"> <li>- Identify characteristics from equations in vertex form</li> <li>- Select the correct equation given a list of transformations</li> <li>- Select the correct list of transformations (in the correct order) given an equation</li> <li>- Select the correct equation for an expression in vertex form that is transformed again (see lesson for 5.3)</li> </ul> </li> <li>• Short answer question to state transformations given an equation. (QR2)</li> <li>• Explain the step pattern (5.1 lesson) and how you can use it to find the 'a' value when you are given a graph. (QR2)</li> </ul>
	<b>Part 2 (WRITE &amp; SCAN)</b> <ul style="list-style-type: none"> <li>• Graph a parabola by transforming the graph of <math>y = x^2</math> (QR2)</li> <li>• Write a relation in vertex form given the vertex and a point. (QR2)</li> <li>• Write in vertex form given standard form (<math>x = -b/2a!</math>) (QR2)</li> <li>• Explain partial factoring and show WHY <math>x = -\frac{b}{2a}</math> works to find the vertex from standard form (see 5.6 lesson). (QR2)</li> <li>• Find the zeros from vertex form by REARRANGING YOUR EQUATION (see 5.5 lesson). (QR4)</li> <li>• Revenue problem (QR4)</li> <li>• Choose one of two word problems with the equations given. (QR4)</li> </ul>
Suggested Review: p. 304 #1, 3 – 5, 7c, 8, 9, 12, 13, 14a, 15 – 17; p. 306 #1 – 3, 5 ; p. 284 #15; p. 294 #11, 12; Find the zeros for $y = \frac{1}{2}(x - 2)^2 - 8$ by rearranging the equation.	
<b>Notes:</b> Please study. Do the review, but also review your notes/video lessons and feedback on your quizzes. If you need help contact me and we will make an appointment in Teams.	