

Common Core State Standards for Mathematics		
Domain: Interpreting Functions		
Properties of Functions (F-IF.8-9)		
High School		
Score 4.0	In addition to Score 3.0, in-depth inferences and applications that go beyond instruction to the standard. The student will:	Example Activities
3.5	In addition to score 3.0 performance, in-depth inferences and applications with partial success.	
Score 3.0	<p>The student will:</p> <ul style="list-style-type: none"> show zeros, extreme values and symmetry of the graph using the process of factoring and completing the square (F-IF.8a) interpret zeros, extreme values and symmetry of a quadratic function in terms of a context (F-IF.8a) use the properties of exponents to interpret expressions for exponential functions (F-IF-8b) compare properties of two functions each represented in a different way (algebraically, graphically, numerically in tables, or by verbal descriptions) (F-IF.9) <p>The student exhibits no major errors or omissions.</p>	<p><u>Gallery Walk</u> – Students will be placed in groups of three and given a blank poster paper. The groups will be assigned three different polynomial functions. The groups will be tasked to determine the zeros, extreme values, and symmetry (if any) and show their methods for obtaining these values. Each student in the group will be required to complete this task for one of the assigned functions. All group members will be required to agree upon the findings for all functions. Once the group is in agreement the teacher will verify the accuracy of the group’s work. The students will then place the values along with the graph and work on their poster. The class will then participate in a gallery walk taking specific note of the correlation between the function and it’s zeros, extreme values and symmetry.</p>
2.5	No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content	
Score 2.0	<p>There are no major errors or omissions regarding the simpler details and processes as the student will:</p> <ul style="list-style-type: none"> recognize or recall specific vocabulary, such as: <ul style="list-style-type: none"> perform basic processes, such as: <ul style="list-style-type: none"> show equivalent forms of quadratic functions by using factoring or completing the square (F-IF.a) <p>However, the student exhibits major errors or omissions regarding the more complex ideas and processes.</p>	<p><u>Card matching</u> – Students will be placed in groups of two and will be given sets of cards that represent a quadratic function on one card and its corresponding factors on another. The students are then tasked to match the function with its correct roots and write an explanation as to why those cards are equivalent. Once the group has matched all cards and written explanations, the teacher will verify the accuracy of the matches and their reasoning providing immediate specific feedback to the students.</p>
1.5	Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content	
Score 1.0	With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.	
0.5	With help, a partial understanding of the 2.0 content but not the 3.0 content	
Score 0.0	Even with help, no understanding or skill demonstrated.	