**FOM 11**

**Quadratics Review #1 Online**

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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| **Learning Goals** | **Novice**  **1/2** | **Apprentice**  **3/4** | **Expert**  **5/6** |
| I can communicate the characteristics of a quadratic function |  |  |  |
| I can create a quadratic equation of a graph in various formats (vertex, factor, and general form |  |  |  |

***Novice***

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| What are the three forms of a quadratic function? How do you represent these functions? What data can you get from each of these forms? | For the below graphs, identify the axis of symmetry and the co-ordinates of the vertex.    Axis of symmetry: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Vertex: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Value of a = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Domain: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Range: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| For the below graph, identify the axis of symmetry and the co-ordinates of the vertex.    Axis of symmetry: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Vertex: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Value of a: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Domain: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Range: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | For the below graphs, identify the axis of symmetry and the co-ordinates of the vertex.    Axis of symmetry: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Vertex: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  a-value: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Domain: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Range: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| Image result for cartesian planeGraph the below quadratic:  y = - (x – 1)2 + 3 | |
| Image result for cartesian planeGraph the below quadratic:  y = (x – 1)(x + 3) | |

***Apprentice***

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| What is the equation of the below parabola in vertex form?    Vertex Form: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  General form: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | What is the equation of the below parabola in vertex form?    Vertex Form: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  General form: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| What is the equation of the below parabola in factor form?    Factor Form: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  General form: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | What is the equation of the below parabola in factor form?    Factor Form: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  General form: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| Graph the below quadratic:  y = (x – 2)(x + 4)  Image result for cartesian plane | Graph the below quadratic:  y = 2(x – 1)2 - 5  Image result for cartesian plane |

***Expert***

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| Graph the following equation (without using a table of values): f(x) = -2(x - 1)2 + 8  Image result for cartesian plane | Graph the following equation (without using a table of values): f(x) = -(x – 2)(x + 4)  Image result for cartesian plane |
| What is the equation in general form? (CHOOSE which other form to use to access general form)    General Form: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | What is the equation in general form? (CHOOSE which other form to use to access general form)    General Form: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |