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

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Example | Term | What is it? | How does it work/Where do you find it? | What other ideas are related to it? |
| *x* can be any number in the interval  or: | Domain |  |  |  |
| The graph is decreasing when *x* is in the interval | Interval of Decrease |  |  |  |
| The graph is increasing when *x* is in the interval | Interval of Increase |  |  |  |
| *y* can be any number in the interval  or: | Range |  |  |  |
| The vertex is the point . The maximum is at | Vertex/  Maximum/  Minimum |  |  |  |
| The axis of symmetry between (-3, 0) and (-1, 0):  The axis of symm. is | Axis of Symmetry |  |  |  |
| The y-int is  (0, -3) | Y-intercept |  |  |  |
| Zeros are:  Plug in to check | Quadratic Solutions/  Roots/X-intercepts |  |  |  |
| is notone-to one, because the inverse does not have exactly one *y*-value for every *x*-value. | One-to-one Function |  |  |  |
| …solve for *x, plug in for y*:  & | System of Equations |  |  |  |
| is between  and  So, is between 10 & 11, but closer to 10. | Approximating Square Roots |  |  |  |
|  | Simplifying a Square Root |  |  |  |
| |  |  |  | | --- | --- | --- | |  |  |  | |  |  |  | |  |  |  |   The product of and is . | Determining the Product |  |  |  |
| Now, factor and solve… | Completing the Square |  |  |  |
|  | The Quadratic Formula |  |  |  |
|  | Factoring |  |  |  |
| or  or  The zeros are | Determining Quadratic Zeros from Factored Form |  |  |  |
| The zeros are | Determining Quadratic Zeros from a Graph |  |  |  |
| The zeros are and arrow is away from y (0), so shading is above. | Determining Interval Solutions to a Quadratic Inequality |  |  |  |
| The parent function has been translated left 8 and up 12. | Translations in Vertex Form |  |  |  |
| The inverse of is . | Write Inverse Points |  |  |  |
|  | Write Inverse Equations |  |  |  |

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

Concepts you will need to understand for the Semester 1 Final Exam

|  |  |
| --- | --- |
| Approximating Square Roots | Product |
| Axis of Symmetry | Quadratic Formula |
| Completing the Square | Quadratic Inequality |
| Direction that a quadratic graph opens | Quadratic Solutions |
| Domain | Range |
| Factor | Roots |
| Factored Form of a Quadratic | Simplifying a Square Root |
| Interval of Decrease | System of Equations |
| Interval of Increase | Transformation |
| Interval Solutions | Translation |
| Inverse | Vertex |
| Maximum | X-intercepts |
| Minimum | Y-intercept |
| One-to-one Function | Zeros |

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

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