*Unit 1 Test REVIEW – Functions & Inverses (H)* Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**1. Identify the following Key Features**

Domain: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Range: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Increasing: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Decreasing: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Positive: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Negative: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Maximum: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Relative Absolute

Minimum: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Relative Absolute

X-intercept(s): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Is the graph a function? YES or NO

**Find the inverse of the following functions.**

2. 3.

4. 5.

|  |  |
| --- | --- |
| **x** | **f(x)** |
|  |  |
|  |  |
|  |  |
|  |  |
| 3 | 4 |

6. Given the table of values for f(x), what is ? \_\_\_\_\_\_\_\_\_

7. Given the table of values for f(x), what is ? \_\_\_\_\_\_\_\_\_

8. Given the table of values for f(x) what is ? \_\_\_\_\_\_\_\_\_

9. \_\_\_\_\_\_\_A function is shown below. What is the value of the expression

 for

 for

 for

10. \_\_\_\_\_\_\_The graph of the function will be shifted left 8 units and down 5 units, reflected over the x-axis. Write the function that corresponds to the resulting graph.

11. Use the piecewise function below to answer the following questions”

12. What is the value of = \_\_\_\_\_\_\_ 13. What is the value of = \_\_\_\_\_\_\_

14. What is the value of = \_\_\_\_\_\_\_\_\_\_\_ 15. What is the value of = \_\_\_\_\_\_\_

16. Given the following equation, explain the transformation in words:

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

17. Given the parent function (solid) and transformation (dotted), list the transformations the occurred.



18. Write the equation of a cube root function translated 4 units up, 8 units left, vertically stretched by a factor of 2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

19. Write the equation of a square root function reflected over the x-axis, shifted 2 units left, 7 units down. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

20. Write the equation of a quadratic function vertically compressed by a factor of 1/3, reflected over the x-axis, shifted right 4. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_