## Algebra II Test Review Intro to Functions Review

- The review is due on the day of the test.
- Review will not be graded unless all work and answers are written on separate paper.
- In order to be eligible to retest, this review must be complete, accurate, and turned in.
- NO WORK NO CREDIT

#1-2. Use interval notation to represent the set of numbers.



## #3 - 4. Decide whether the following function is <u>continuous</u> or <u>discrete</u>. Choose a reasonable domain and range for the situation.

3. A framing store determines the price of wood based on the area *a* of the picture to be framed, plus an additional \$3 for installation. The function t(a) describes the total cost of the framed picture, with wood and installation, based on the area of the picture.

4. A population of mice triples every 3 months. The function p(t) shows the number of rabbits after *t* months

#5 – 7. Give the <u>equation</u>, basic <u>graph</u> and the <u>domain and range</u> for the following functions.
5. Quadratic function
6. Square root function
7. Absolute value function

8. Write the equation that is the translation of  $y = x^2$  right 4 unit and down 1 units.

9. Write the equation that is the traslation of y = |x| left 1 and up 11 units.

10. Describe the combined transformation for t(x) = -3g(x-1) + 1, in the correct order.

11. Describe the combined transformation for  $t(x) = \frac{1}{2}f(x) + 7$ , in the correct order.

#12 - 13. Using the graph of f(x) on the left, graph the transformations.



## #14 – 15. Evaluate the following expressions given the following functions:

$$f(x) = x^2 - 2 \text{ and } g(x) = 2x + 3.$$
  
14.  $f(-2) - g(1)$   
15.  $f(4) - 3g(-2)$ 

16. Given f(x) = |x - 2|, sketch the graph. Is f(x) a function? Is it continuous or discrete?

#17 – 18. Use any method to find the inverse of the function. Then use it to find  $g^{-1}(3)$ ,  $g^{-1}(0)$ , and  $g^{-1}(1)$ .

17.  $g(x) = \frac{1}{3}x - 2$  18. g(x) = 2x + 1

## Use the graphs below to answer #19 - 21.

19. Graph the inverse of the function f(x) graphed below. Is it a function?







Range

#25 – 30. Match each term to its definition.

a.	Continuous	d.	Inverse
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b.	Function	e.	Discrete
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- c. Domain f.
- \_ 25. A relation which has exactly one output for every input (one y for every x).
- \_\_\_\_\_ 26. A function whose graph that consists of separate, unconnected points.
- \_\_\_\_\_ 27. A function whose graph is unbroken.
- \_\_\_\_\_ 28. This "undoes" a function and represents it's "opposite".
- \_\_\_\_\_ 29. The set of all x-coordinates.
- \_\_\_\_\_ 30. The set of all y-coordinates.