Name: _____ Hour: _____ Date: _____

Transformations of Functions Test Review

DIRECTIONS: Give the name of the function family represented in each equation and describe *all* of the transformations represented.

1) $g(x) = 3\sqrt{x-4}$ Parent Function: _____

Transformation(s): _____

2) $f(x) = (x+2)^3 - 1$ Parent Function: _____

Transformation(s): _____

3) $h(x) = -|x| + 3$ Parent Function: _____

Transformation(s): _____

4) $g(x) = 5\sqrt[3]{x} - 8$ Parent Function: _____

Transformation(s): _____

5) $f(x) = 3(x-5)^2$ Parent Function: _____

Transformation(s): _____

6) $g(x) = \frac{1}{2}^{x-6} + 3$ Parent Function: _____

Transformation(s): _____

7) $h(x) = (x+3)^3 + 4$ Parent Function: _____

Transformation(s): _____

8) $f(x) = -2^{x-1} + 9$ Parent Function: _____

Transformation(s): _____

9) $g(x) = 3x - 7$ Parent Function: _____

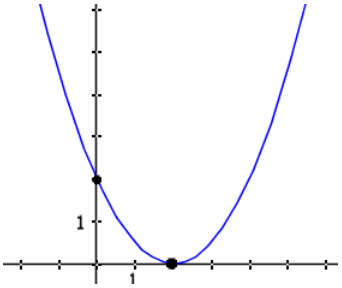
Transformation(s): _____

10) $h(x) = 0.7|-x+3| - 4$ Parent Function: _____

Transformation(s): _____

Directions: For the following graphs name the name of the function family represented, write the equation to represent the transformed function and describe *all* of the transformations. SHOW ALL WORK WHEN NECESSARY.

11)



Parent Function:

Equation:

Transformation(S):

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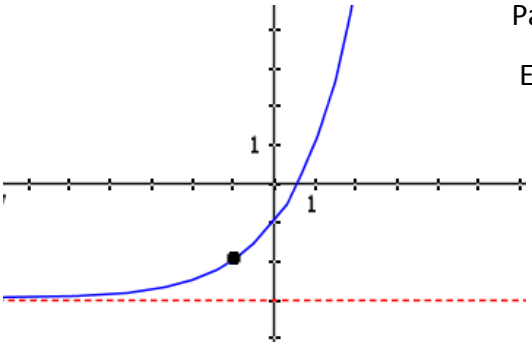
12)



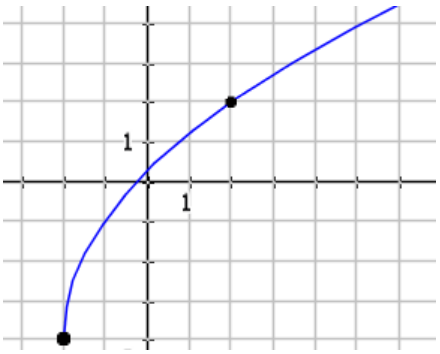
Parent Function:

Equation:

Transformation(S):

---

13)



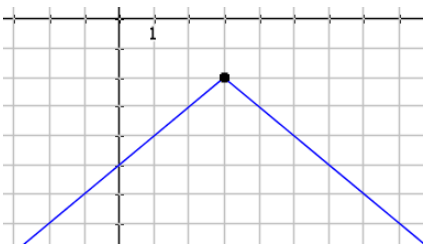
Parent Function:

Equation:

Transformation(S):

---

14)

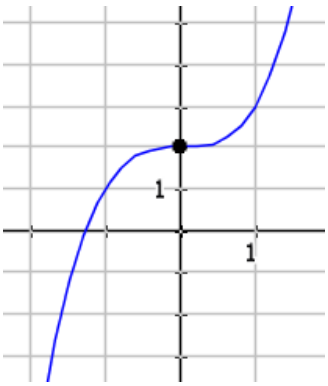


Parent Function:

Equation:

Transformation(S):

15)



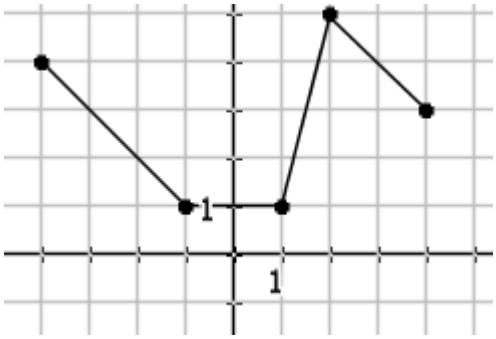
Parent Function:

Equation:

Transformation(S):

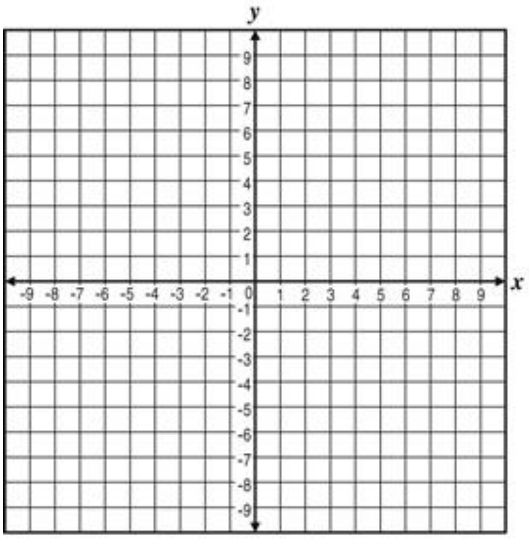
DIRECTIONS: Use the following arbitrary graph of $y = f(x)$ to describe the transformations and sketch a graph of the transformed function. *You must show a table for each transformation.*

16)

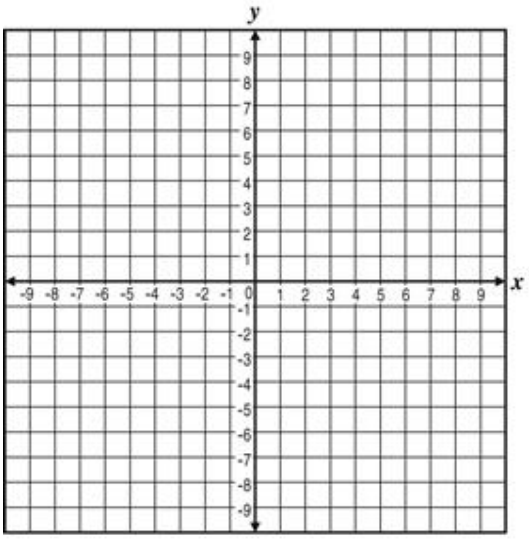


a) Create a table of values to represent this arbitrary parent function.

b) $y = f(x - 2) + 3$



c) $y = -2f(x)$

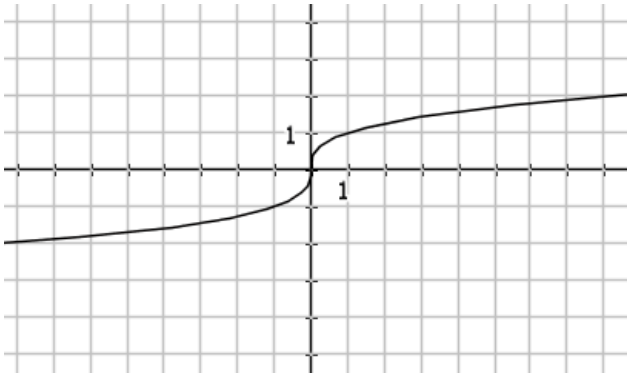


***** DON'T FORGET TO DESCRIBE THE TRANSFORMATIONS AND MAKE A TABLE FOR PARTS B & C *****

Content from the Parent Functions Unit

Identify the parent function and each of the key features listed for each graph. (YES, YOU WILL SEE THIS ON THE TEST.)

17)



Function Family:

Domain:

Range:

Increasing Interval:

Decreasing Interval:

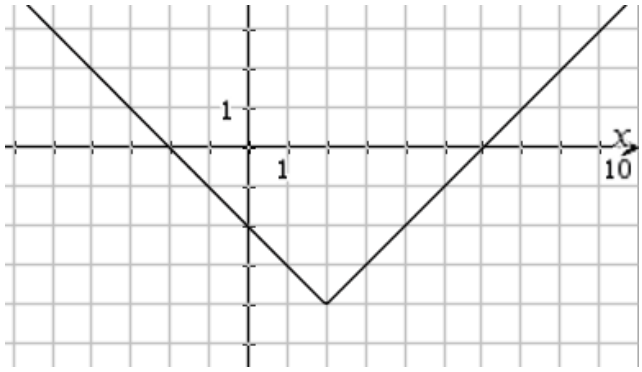
x-intercepts:

y-intercepts:

Asymptotes:

End-Behavior:

18)



Function Family:

Domain:

Range:

Increasing Interval:

Decreasing Interval:

x-intercepts:

y-intercepts:

Asymptotes:

End-Behavior: