

Name: Key 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: Square root

Transformation(s): stretch by 3, right 4

2) $f(x) = (x+2)^3 - 1$

Parent Function: cubic

Transformation(s): left 2, down 1

3) $h(x) = -|x| + 3$

Parent Function: absolute value

Transformation(s): reflect over x-axis, up 3

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

Parent Function: cube root

Transformation(s): stretch by 5, down 8

5) $f(x) = 3(x-5)^2$

Parent Function: quadratic

Transformation(s): stretch by 3 right 5

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

Parent Function: exponential decay

Transformation(s): right 6, up 3

7) $h(x) = (x+3)^3 + 4$

Parent Function: cubic

Transformation(s): left 3, up 4

8) $f(x) = -2^{x-1} + 9$

Parent Function: exponential growth

Transformation(s): reflect over x-axis, right 1, up 9

9) $g(x) = 3x - 7$

Parent Function: linear

Transformation(s): stretch by 3, down 7

10) $h(x) = 0.7|-x+3| - 4$

Parent Function: absolute value

Transformation(s): compress by 0.7, reflect over y-axis, left 3, down 4