

**# 1- 7 Give the name of the parent function and describe the transformation represented.**

1.  $g(x) = x^2 - 1$  Name: \_\_\_\_\_ Transformation: \_\_\_\_\_

2.  $f(x) = 2|x - 1|$  Name: \_\_\_\_\_ Transformation: \_\_\_\_\_

3.  $h(x) = \sqrt{x - 2}$  Name: \_\_\_\_\_ Transformation: \_\_\_\_\_

4.  $g(x) = x^3 + 3$  Name: \_\_\_\_\_ Transformation: \_\_\_\_\_

5.  $g(x) = \frac{1}{x + 6}$  Name: \_\_\_\_\_ Transformation: \_\_\_\_\_

6.  $f(x) = |x + 5| - 2$  Name: \_\_\_\_\_ Transformation: \_\_\_\_\_

7.  $h(x) = \frac{1}{x} - 5$  Name: \_\_\_\_\_ Transformation: \_\_\_\_\_

**#8-12 Identify the domain and range of the function. Describe the transformation from its parent function.**

8.  $g(x) = 3\sqrt{x}$  Domain : \_\_\_\_\_ Range : \_\_\_\_\_ Transformation: \_\_\_\_\_

9.  $h(x) = -x^2 + 1$  Domain : \_\_\_\_\_ Range : \_\_\_\_\_ Transformation: \_\_\_\_\_

10.  $h(x) = -|x - 2|$  Domain : \_\_\_\_\_ Range : \_\_\_\_\_ Transformation: \_\_\_\_\_

11.  $f(x) = \frac{3}{4}\sqrt{x}$  Domain : \_\_\_\_\_ Range : \_\_\_\_\_ Transformation: \_\_\_\_\_

12.  $h(x) = 6(x + 9)^2$  Domain : \_\_\_\_\_ Range : \_\_\_\_\_ Transformation: \_\_\_\_\_

**#13 - 17 Given the parent function and a description of the transformation, write the equation of the transformed function, f(x).**

13. Absolute value—vertical shift up 5, horizontal shift right 3. \_\_\_\_\_

14. Radical—vertical compression by  $\frac{2}{5}$  \_\_\_\_\_

15. Cubic—reflected over the x axis and vertical shift down 2 \_\_\_\_\_

16. Reciprocal—vertical stretch by 8 \_\_\_\_\_

17. Quadratic—vertical compression by .45, horizontal shift left 8. \_\_\_\_\_