**Transformation Practice**

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

8. g(x) =  + 5 Domain : \_\_\_\_\_\_\_\_\_\_\_\_ Range : \_\_\_\_\_\_\_\_\_\_\_\_

 Transformations\_\_\_\_\_\_\_\_\_\_\_\_

9. h(x) = - x2 + 1 Domain : \_\_\_\_\_\_\_\_\_\_\_\_Range : \_\_\_\_\_\_\_\_\_\_\_\_

 Transformations\_\_\_\_\_\_\_\_\_\_\_\_

10. h(x) =  Domain : \_\_\_\_\_\_\_\_\_\_\_\_Range : \_\_\_\_\_\_\_\_\_\_\_\_

Transformations\_\_\_\_\_\_\_\_\_\_\_\_

11. f(x) = log3(x - 2) + 7 Domain : \_\_\_\_\_\_\_\_\_\_\_\_Range : \_\_\_\_\_\_\_\_\_\_\_\_

 Transformations\_\_\_\_\_\_\_\_\_\_\_\_

12. h(x) = log5(x ) - 4 Domain : \_\_\_\_\_\_\_\_\_\_\_\_Range : \_\_\_\_\_\_\_\_\_\_\_\_

Transformation\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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

1. Absolute value—vertical shift up 5, horizontal shift right 3. \_\_\_\_\_\_\_\_\_\_\_\_
2. Radical—vertical shift down 4, horizontal shift left 2 \_\_\_\_\_\_\_\_\_\_\_\_
3. Cubic—reflected over the x axis and vertical shift down 2 \_\_\_\_\_\_\_\_\_\_\_\_
4. Logarithmic (base 7)—reflected over x axis, vertical shift up 3 \_\_\_\_\_\_\_\_\_\_\_\_
5. Quadratic—vertical compression by .45, horizontal shift left 8. \_\_\_\_\_\_\_\_\_\_\_\_

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

8. g(x) =  + 5 Domain : \_\_\_\_\_\_[0, ∞)\_\_\_\_\_\_\_ Range : \_\_\_\_\_[5,∞)\_\_\_\_\_\_\_

 Transformations:\_\_\_\_\_\_\_\_Up 5\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

9. h(x) = - x2 + 1 Domain : \_\_\_\_(-∞,∞)\_\_\_\_\_ Range : \_\_\_\_(-∞,1]\_\_\_\_\_

 Transformations:\_\_\_\_\_\_\_\_\_Reflect, Up 1\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

10. h(x) =  Domain : \_\_\_\_(-∞,∞)\_\_\_ Range : \_\_\_\_(-∞,0]\_\_\_\_\_

 Transformations:\_\_\_\_Right 2, Reflect\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

11. f(x) = log3(x - 2) + 7 Domain : \_\_\_[3,∞)\_\_\_\_\_ Range : \_\_\_[7,∞)\_\_\_\_\_

 Transformations:\_\_\_\_\_\_Right 2, Up 7\_\_\_\_\_\_\_\_\_\_\_\_

12. h(x) = log5(x ) - 4 Domain : \_\_\_\_[1,∞)\_\_\_\_ Range : \_\_\_\_\_\_[-4,∞)\_\_\_\_\_\_

 Transformation:\_\_\_\_\_\_\_\_\_Down 4\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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

1. Absolute value—vertical shift up 5, horizontal shift right 3. \_\_\_\_$y=\left|x-3\right|+5$\_\_\_
2. Radical—vertical shift down 4, horizontal shift left 2 \_\_$y=\sqrt{x+2}-4$\_\_\_\_\_\_\_
3. Cubic—reflected over the x axis and vertical shift down 2 \_\_y = -x3 - 2\_\_\_\_\_\_\_
4. Logarithmic (base 7)—reflected over x axis, vertical shift up 3 \_\_$y=-log\_{7}\left(x\right)+3$
5. Quadratic—vertical compression by .45, horizontal shift left 8. \_\_$y=.45(x+8)^{2}$\_\_\_\_\_\_