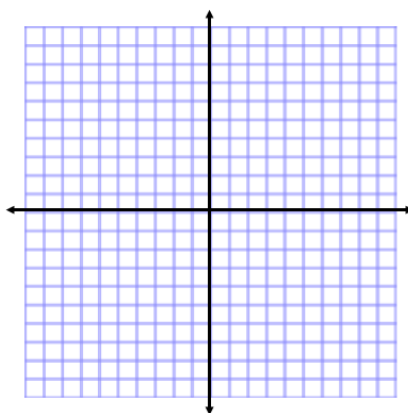# Parent Graphs & Transformations

For problem 1- 9, please give the name of the parent function and describe the transformation represented. You may use your graphing calculator to compare & sketch the parent and the transformation.
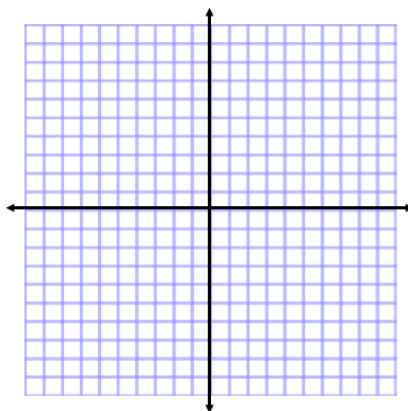
1. $g(x) = x^2 - 1$ Parent: _____

Transformations:_____
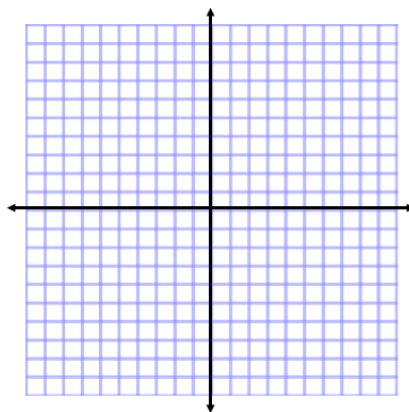
2. $f(x) = 2|x-1|$ Parent: _____

Transformations:_____
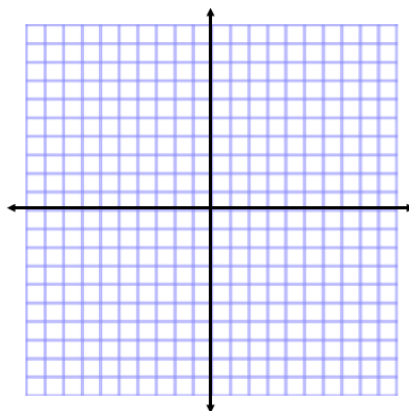
3. $h(x) = -\sqrt{2x} - 2$ Parent: _____

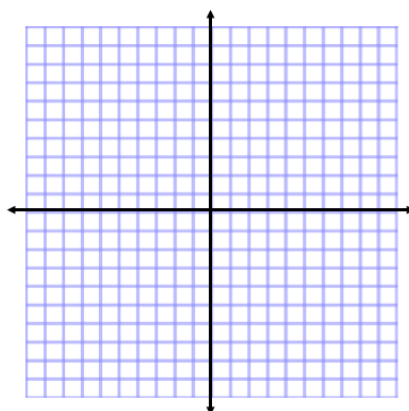Transformations:_____

4. $g(x) = -2(x+1)^2 + 3$ Parent: _____

Transformations:_____

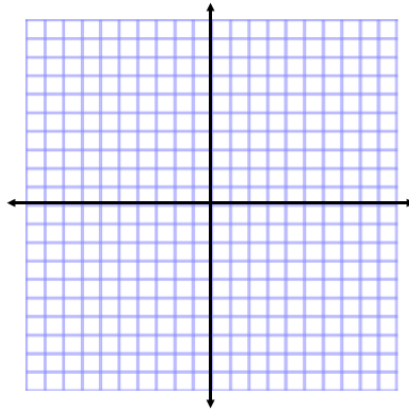**5.** $g(x) = -3x - 2$ Parent: _____
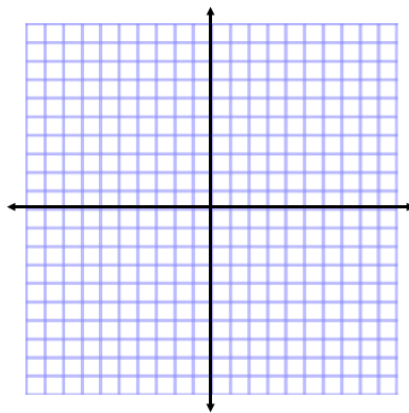
Transformations:_____

6. $f(x) = |x+5| - 2$ Parent: _____

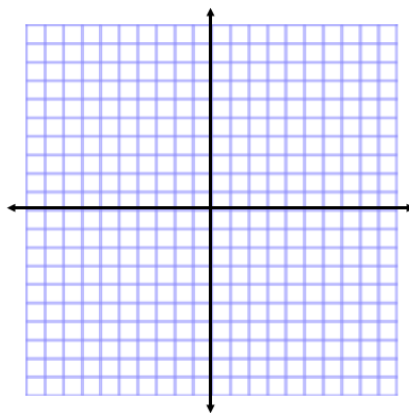Transformations:_____

7. $h(x) = (-x-2)^3 + 4$ Parent: _____

Transformations:_____
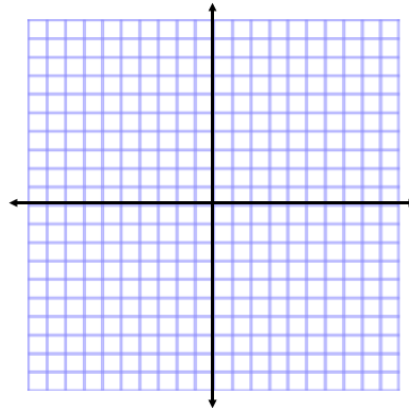
8. $h(x) = -x^2 + 1$ Parent: _____

Transformations:_____

9. $h(x) = -|x - 2|$ Parent: _____

Transformations:_____

For problems 10 – 13, given the parent function and a description of the transformation, write the equation of the transformed function, f(x).

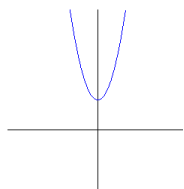10. Absolute value—vertical shift up 5, horizontal shift right 3. _____

11. Linear—vertical shrink by $\dfrac{2}{5}$ _____

12. Square Root —reflected over the x axis, vertical shift down 2._____
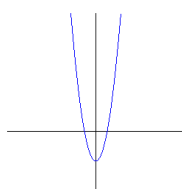
13. Quadratic—vertical stretch by 5, horizontal shift left 8._____

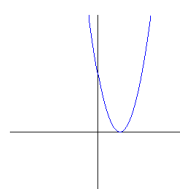**14.** Which graph best represents the function $f(x) = 2x^2 - 2$?

a.   b.   c.   d.