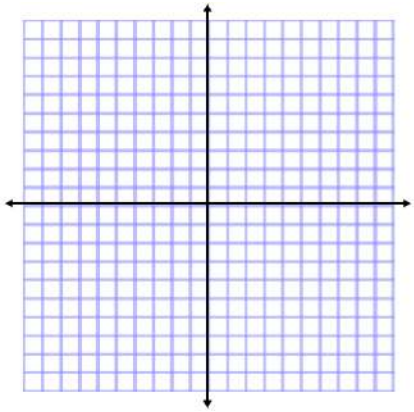
Algebra II: Translations on Parent Functions Review

Name _____ Period _____ Date _____

For problem 1- 6, please give the name of the parent function and describe the transformation represented. You may use your graphing calculator to compare & sketch.

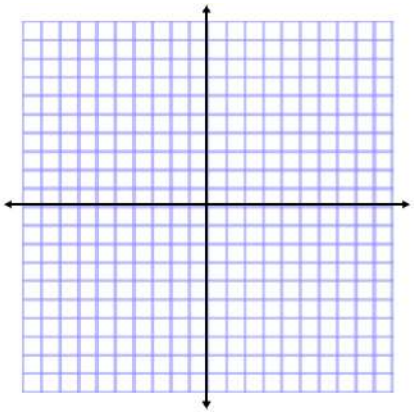
1. $g(x) = x^2 - 6$ Parent: _____

Transformations:_____



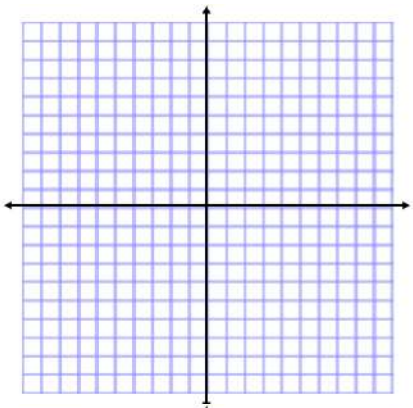
2. $f(x) = |x-1|$ Parent: _____

Transformations:_____



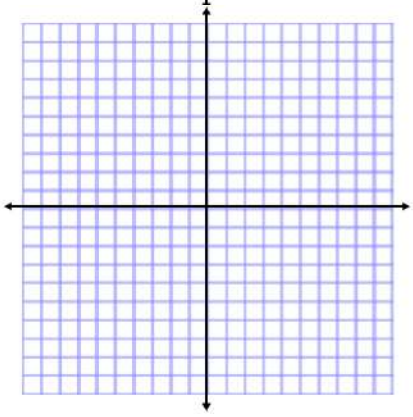
3. $h(x) = \sqrt{x}+4$ Parent: _____

Transformations:_____



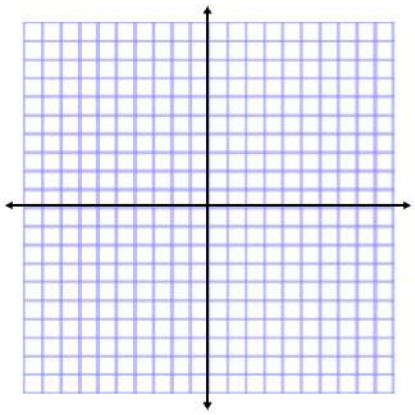
4. $g(x) = (x+1)^2 + 3$ Parent: _____

Transformations:_____



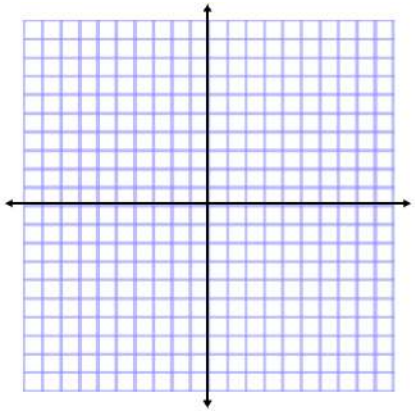
5. g(x) = $x-2$ Parent: _____

Transformations:_____



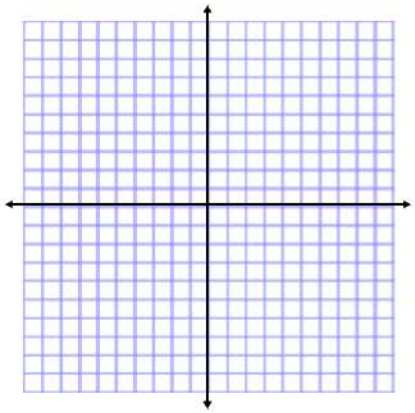
6. f(x) = $|x+5|$ - 2 Parent: _____

Transformations:_____



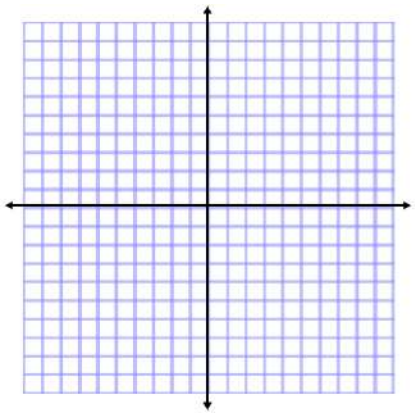
7. h(x) = $\sqrt{x+2}-5$ Parent: _____

Transformations:_____



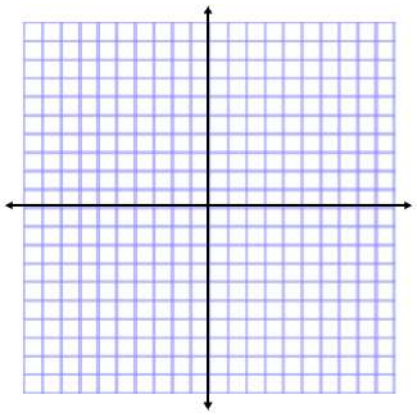
8. h(x) = x^2 + 1 Parent: _____

Transformations:_____



9. h(x) = $x^3 - 2$ Parent: _____

Transformations:_____



For problems 10 – 14, given the parent function and a description of the transformation, write the equation of the transformed function, f(x).

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

11. Linear—vertical shift up 5. _____

12. Square Root —vertical shift down 2, horizontal shift left 7. _____

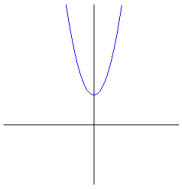
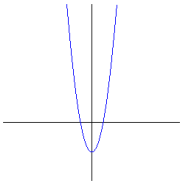
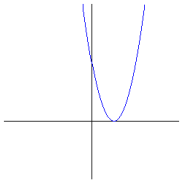
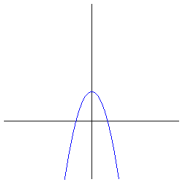
13. Quadratic— horizontal shift left 8. _____

14. Quadratic—vertex at (-5, -2). _____

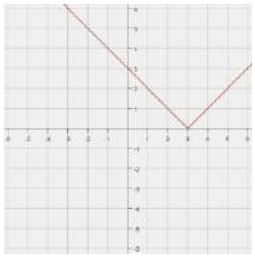
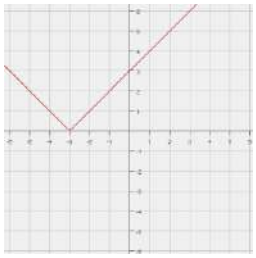
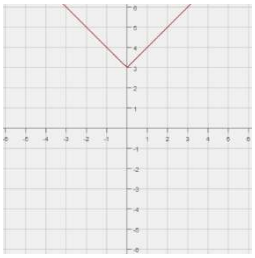
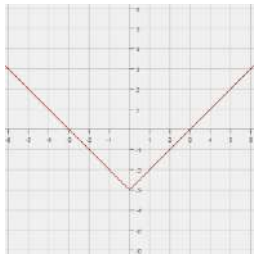
For problems 15 & 16, circle the graph that best represents the given function.

15. f(x) = x^2 - 2?

a. b. c. d.

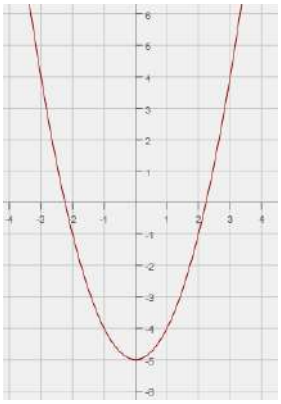





16. g(x) = |x+3|?

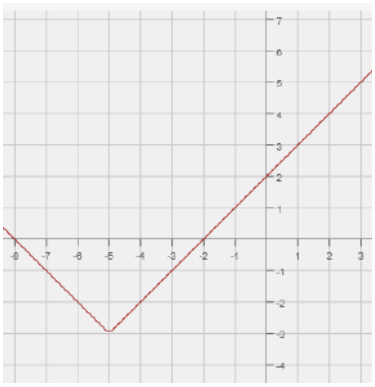
a. 
b. 
c. 
d. 

Write the equation for the following translations of their particular parent graphs. You may use y= or function notation (the f(x) type notation).

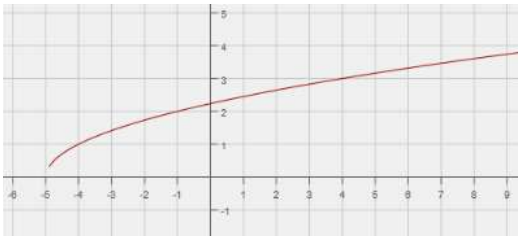
17._____



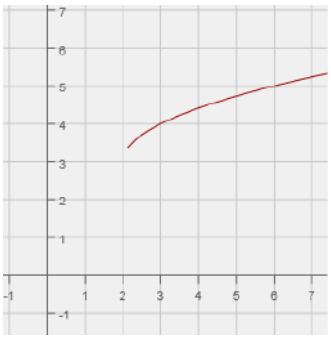
18 ._____



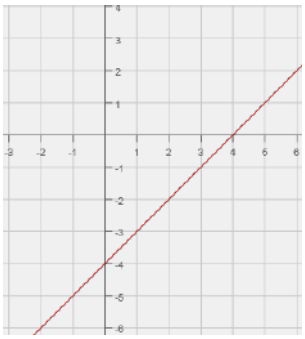
19. _____



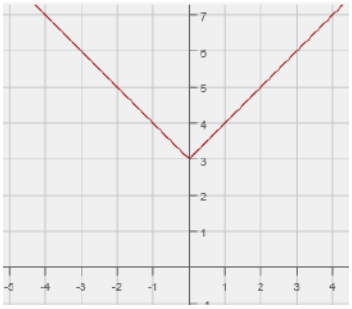
20. _____



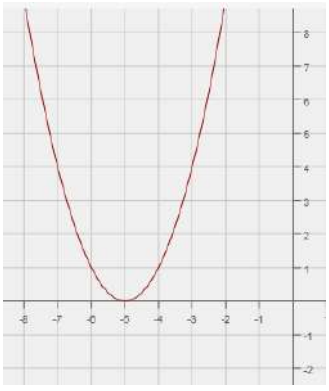
21. _____



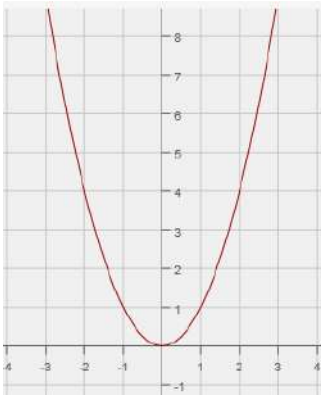
22. _____



23. _____



24. _____



25. _____