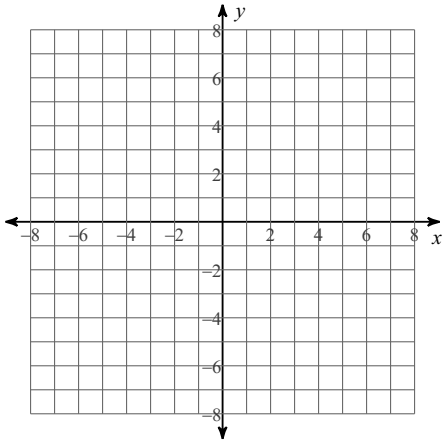
Algebra 1 Name_____

HW29 Vertical Shifts

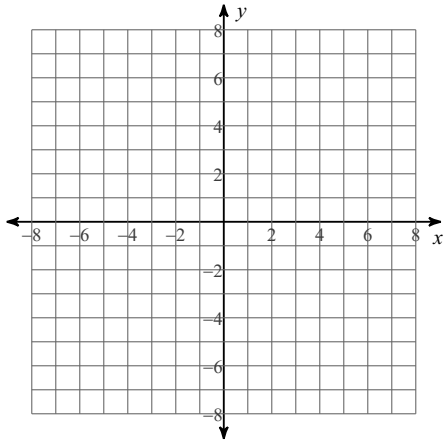
Date_____ Period____

List thefunction defintions of the basic functions and graph them.

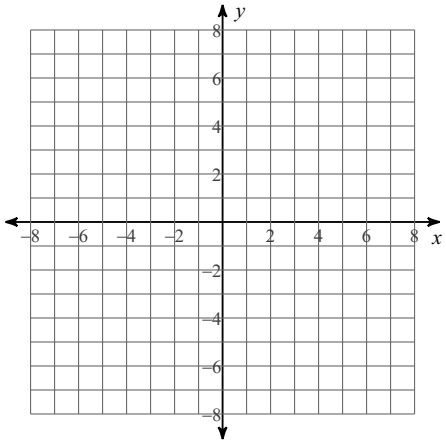
1) Linear



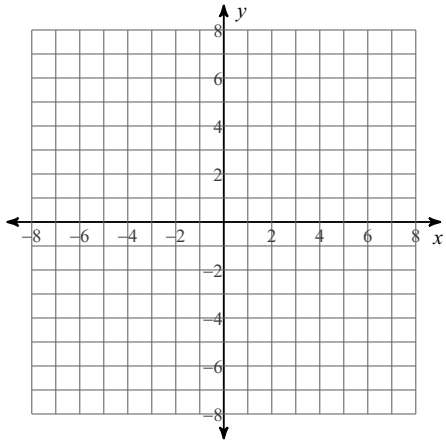
2) Absolute Value



3) Quadratic



4) Square Root



Identify the parent and predict what will occur to the following functions.

5) $f(x) = |x| + 4$

6) $f(x) = |x| - 3$

7) $f(x) = |x| + 9$

8) $f(x) = x^2 + 8$

9) $f(x) = \sqrt{x} + -3$

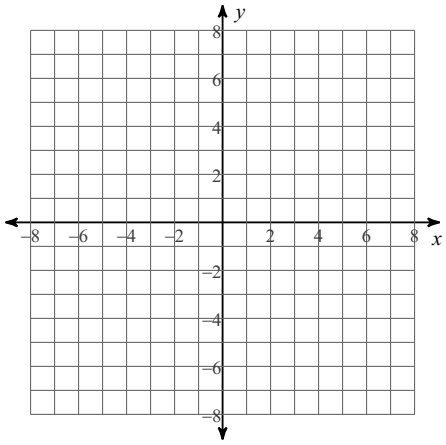
10) $f(x) = \sqrt{x} - 17$

11) $f(x) = x^2 - 20$

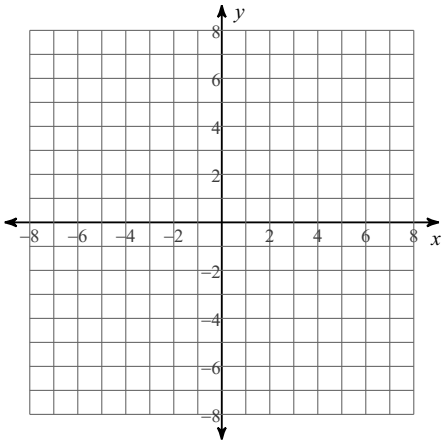
12) $f(x) = |x| + 200$

Graph the following functions.

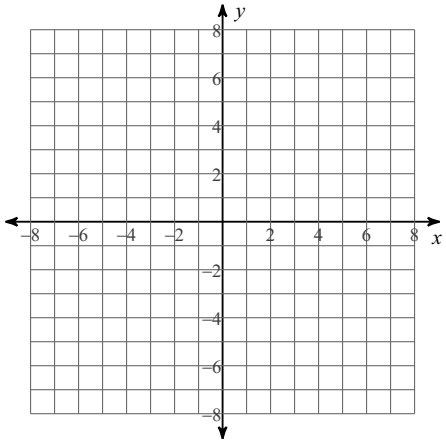
13) $f(x) = |x| + 4$



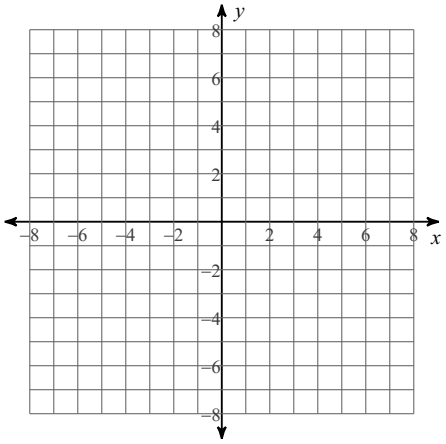
14) $f(x) = |x| - 3$



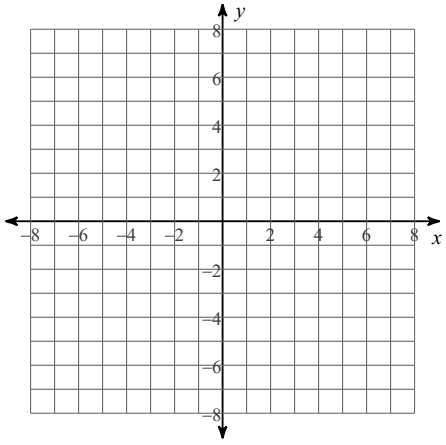
15) $f(x) = \sqrt{x} + 2$



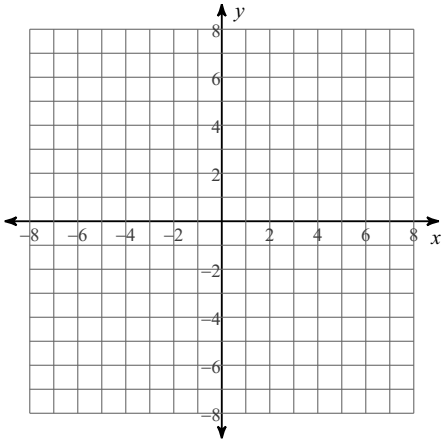
16) $f(x) = \sqrt{x} - 4$



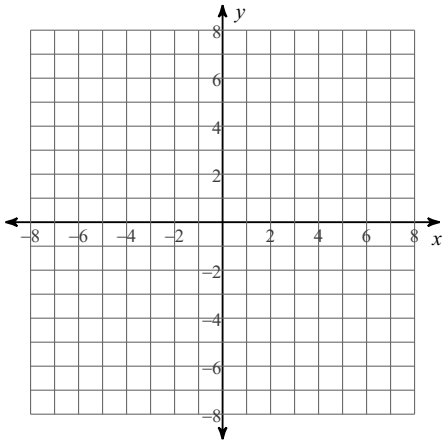
17) $f(x) = x^2 - 3$



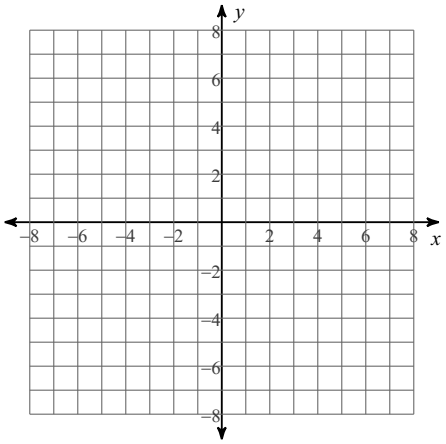
18) $f(x) = x^2 + 2$



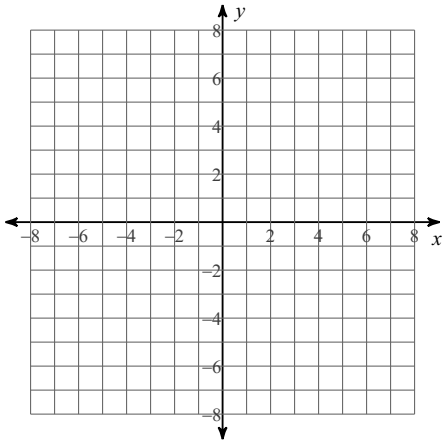
19) $f(x) = |x| - 6$



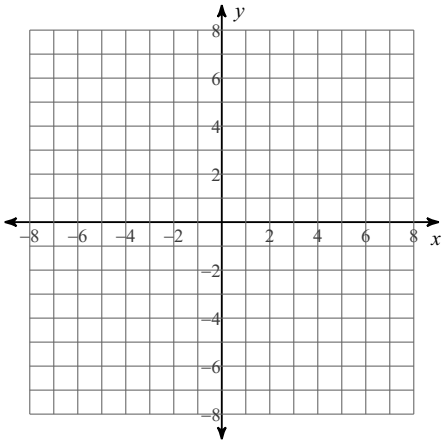
20) $f(x) = |x| - 8$



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



22) $f(x) = x + 6$



Identify the shift. Use the parent function $f(x) = \sqrt{x}$

23) $f(x) + 2$

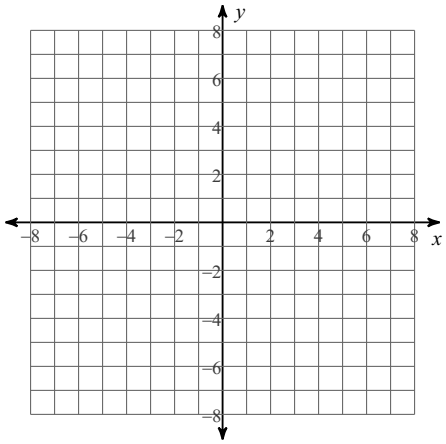
24) $f(x) + 13$

25) $f(x) - 8$

26) $f(x) - 203$

Graph the function. Use the parent function $f(x) = \sqrt{x}$

27) $f(x) - 2$



28) $f(x) + 5$