More Practice: Transforming Functions

State the name of the basic function, **then** explain how the graph of the second functions is transformed from the basic function.

1. $f(x) = x$, $f^*(x) = x - 2$

2. $f(x) = \sqrt{x}$, $f^*(x) = \sqrt{x+2}$

3. $f(x) = x^2$ $f^*(x) = 3x^2 + 1$

4. $f(x) = |x|$, $f^*(x) = \frac{1}{3}|x + 5|$
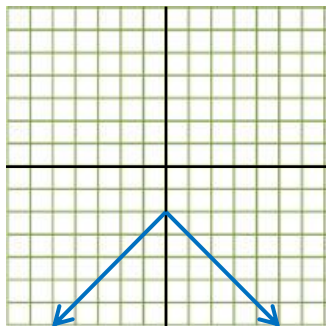
5. $f(x) = x^3$, $f^*(x) = -6(x-1)^3$

6. $f(x) = \sqrt{x}$, $f^*(x) = \sqrt{-4x} + 9$
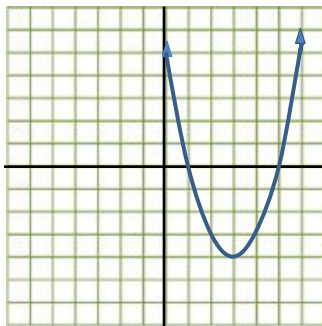
7. $f(x) = |x|$, $f^*(x) = |3x + 7|$

8. $f(x) = x^2$, $f^*(x) = -(2x-6)^2 + 5$

Write the equation for the following functions using the graph:

9.

10.

11.