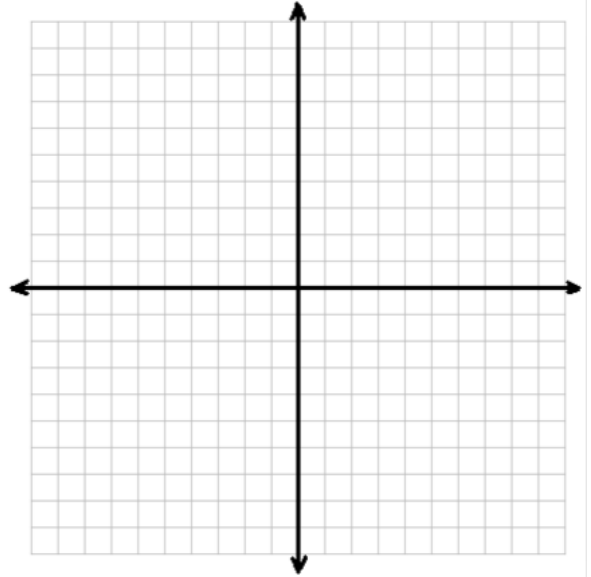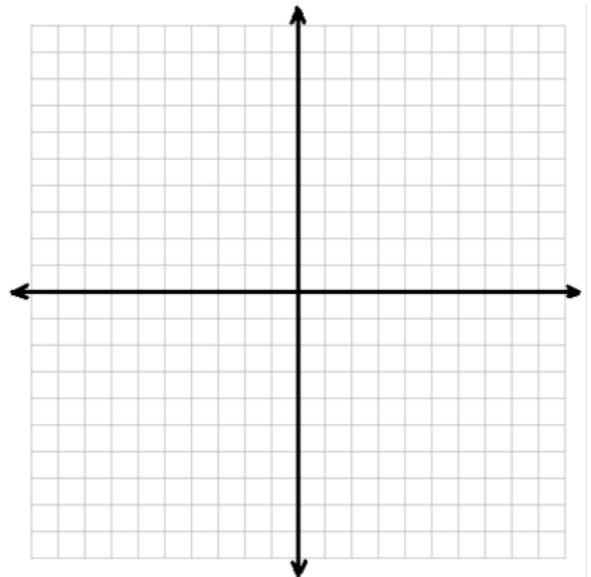1) Graph the following equations by plotting at least 5 points. Write the domain and range for each graph.

a) $y = 3x^2 - 12x + 3$
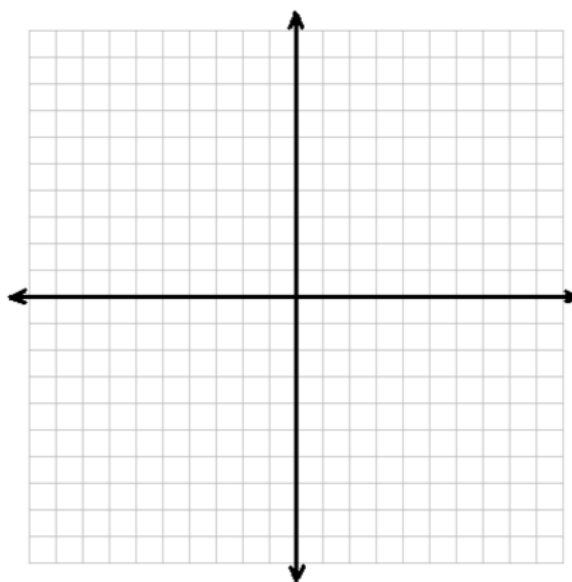

Domain:_____ Range:_____

b) $y = -(x - 3)(x + 1)$

Domain:_____ Range:_____

c) $y = 2(x - 2)^2 - 4$
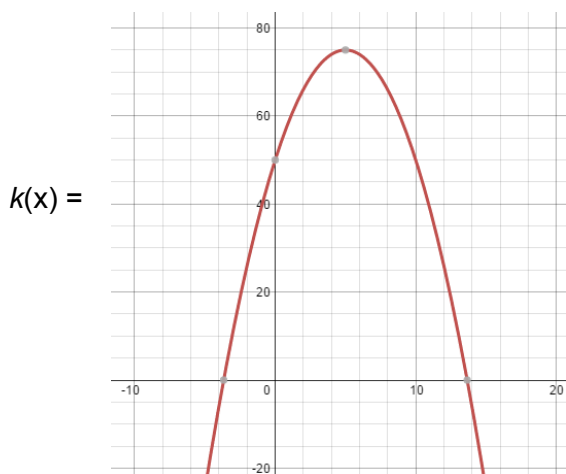
Domain:_____ Range:_____

2) Given the description below, what would be a possible function if it is transforming from the parent function?

      ·   Shifted right by 7 units

      ·   Shifted down by 2 units

      ·   Vertically stretched

2) _____

3) Pick 3 of the 5 functions below to answer the following questions. Circle your choices.

$$f(x) = -x^2 + 3x + 4$$

$g(x)=$

x	-3	-2	-1	0
y	-4	2	4	2

A water balloon is thrown with an initial velocity of 60 feet per second. The balloon is thrown from a height of 3.5 ft. The equation can be modeled by the equation $h(x) = -16x^2 + 60x + 3.5$.

$k(x) =$

$$j(x) = -10(x + 1)(x - 5)$$

a) Given your 3 functions, which one has the largest maximum?

b) Which function has the largest value for the y-intercept?

c) Order the three functions from least to greatest when x = -2.