Find all the parts and graph the quadratic function in intercept form.

1. $f(x) = (x+2)(x-2)$	2. $f(x) = -2(x+3)(x-1)$

1. $f(x) = (x+2)(x-2)$

Direction of opening:

x	$f(x)$

Vertex:

Maximum/Minimum:

Axis of Symmetry:

y-intercept:

x-intercept(s):

Domain: Range:

2. $f(x) = -2(x+3)(x-1)$

x	$f(x)$

Direction of opening:

Vertex:

Maximum/Minimum:

Axis of Symmetry:

y-intercept:

x-intercept(s):

Domain: Range:

Change the quadratic in intercept form to standard form.

5. $f(x) = \dfrac{1}{3}(x+4)(x-3)$

6. First write the quadratic in intercept form. The change it into standard form.

3. $f(x) = \dfrac{1}{2}(x-3)(x+5)$

Direction of opening:

Vertex:

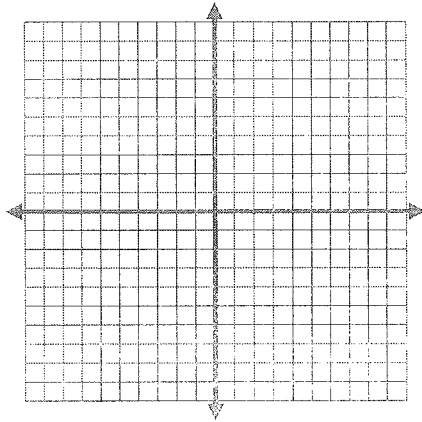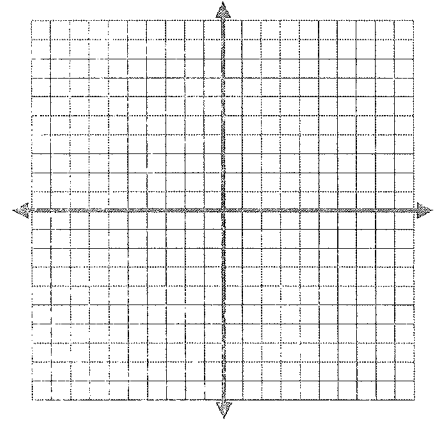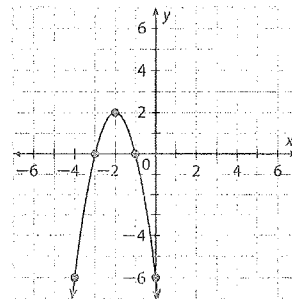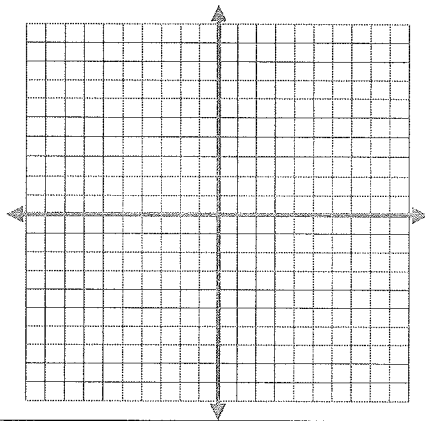| x	$f(x)$

Maximum/Minimum:

Axis of Symmetry:

y-intercept:

x-intercept(s):

Domain: Range:

4. $f(x) = -(x-3)(x-1)$

Direction of opening:

Vertex:

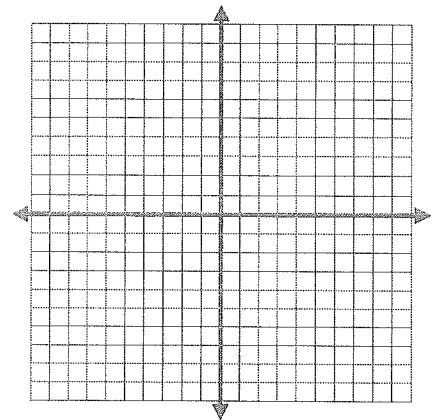| x	$f(x)$

Maximum/Minimum:

Axis of Symmetry:

y-intercept:

x-intercept(s):

Domain: Range:

Exploring the equation of a quadratic function in intercept form.

7. James is attempting a field goal from the 38 yard-line in his football game. The height of the ball, in feet, can be modeled by the function $f(x) = -10x(x-4)$, where x is the time after he kicks the ball.

a. Graph the function.
- Direction of opening
- X-intercepts:
- Vertex:

b. Find the maximum height of the ball; how long does it take to reach this maximum height?

c. Assuming his kick is in line and not wide, if it takes the ball 3.15 seconds to reach the goal posts, what is the height of the ball when it reaches the goal posts?