ALGEBRA II
Chapter 4 section 2
Graph Quadratic Functions in Vertex or Standard Form
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FOCUS:
To graph a quadratic function, what are the advantages in having it written in vertex form or intercept form?

VOCAB:
Vertex form:

Intercept form:

WARM – UP:
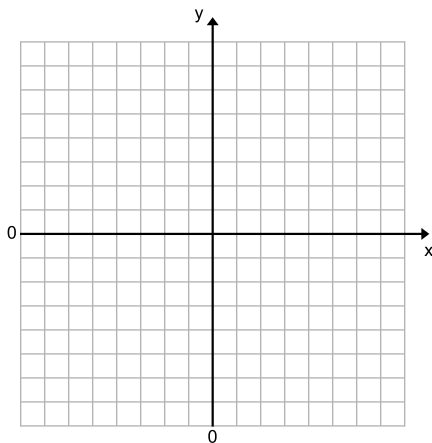
Find the product.

1. $(x + 6)(x + 3)$

2. $(x - 5)^2$

3. $4(x + 5)(x - 5)$

4. A projectile, shot from the ground, reaches its highest point of 225 meters after 3.2 seconds. For how many seconds is the projectile in the air?
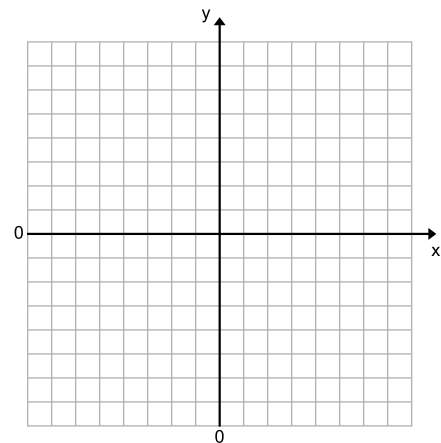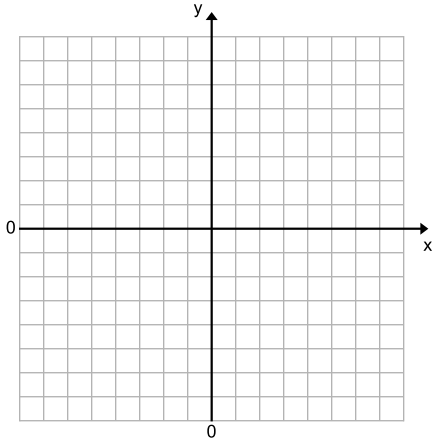
NOTES:
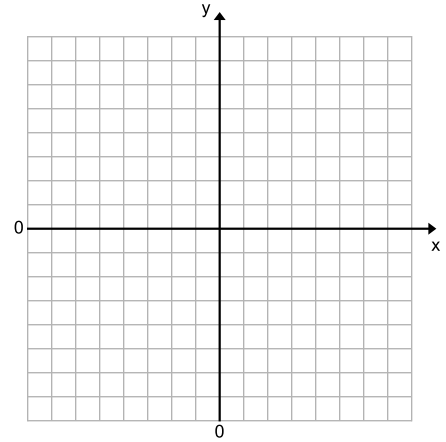
Graph.

$$y = \frac{1}{2}(x - 3)^2 - 5$$

$$y = (x + 2)^2 - 3$$

y = -x(x - 4)   y = 2(x - 4)(x + 1)

If an object is propelled straight upward from Earth at an initial velocity of 80 feet per second, its height after t seconds is given by the function $h(t) = -16t(t - 5)$, where t is the time in seconds after the object is propelled and h is the object's height in feet.

a. How many seconds after it is propelled will the object hit the ground?

b. What is the object's maximum height?

Write in standard form.

y = 3(x - 4)(x + 6) $y = -\dfrac{1}{2}(x + 8)^2 + 35$

Let's see if you comprehended what we worked on in class…

Try _____ for homework