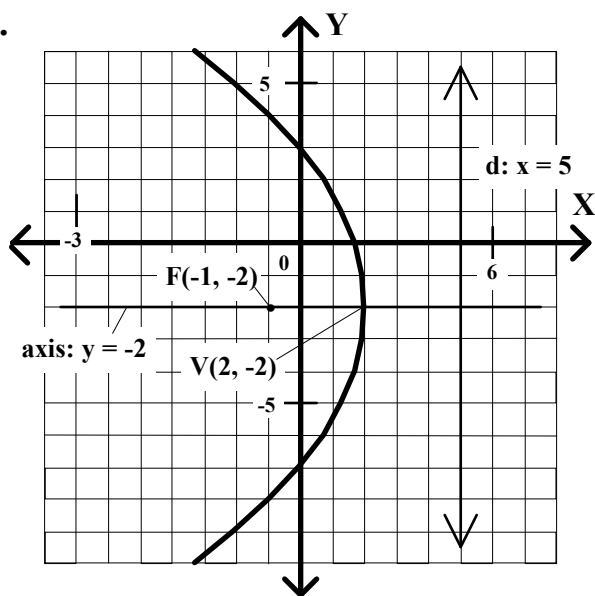


Algebra II Worksheet #5 Unit 7 Selected Solutions

Write the standard form equation and the general form equation of each of the following.

4.



Type 2

$$x - h = a(y - k)^2$$

$$V(2, -2)$$

$$p = -3$$

$$h = 2 \quad k = -2 \quad a = \frac{1}{4p} = \frac{-1}{12}$$

$$x - 2 = \frac{-1}{12}(y - -2)^2$$

standard form

$$x - 2 = \frac{-1}{12}(y + 2)^2$$

$$-12(x - 2) = (y + 2)^2$$

$$-12x + 24 = y^2 + 4y + 4$$

$$0 = y^2 + 12x + 4y - 20$$

$$y^2 + 12x + 4y - 20 = 0$$

general form

In each problem you are given a general form equation. Write the standard form equation and sketch a graph on the graph paper provided.

8. $3x^2 + 30x - y + 73 = 0$

$$3(x^2 + 10x) = y - 73$$

$$3(x^2 + 10x + 25) = y - 73 + 75$$

$$3(x + 5)^2 = y + 2$$

Standard form

$$y + 2 = 3(x + 5)^2$$

type 1

$$h = -5$$

$$\text{vertex } (-5, -2)$$

$$k = -2$$

$$a = 3$$

$$a = \frac{1}{4p}$$

$$3 = \frac{1}{4p} \longrightarrow 12p = 1 \longrightarrow p = \frac{1}{12}$$

open upward

steps

$$1a = 3$$

$$3a = 9$$

$$5a = 15$$

