

Chapter 1 Test Review #2**Use the information provided to write the vertex form equation of each parabola.**

1) $y = -\frac{1}{2}x^2 + 3x - \frac{17}{2}$

2) $y = -x^2 - 2x - 10$

3) $y = -11x^2 - 88x - 169$

4) $y = -3x^2 - 42x - 153$

Solve each equation by completing the square.

5) $v^2 = -16v - 97$

6) $a^2 + 10 = -20a$

Solve each equation by factoring.

7) $2n^2 + 5 = -7n$

8) $5v^2 + 28v = 49$

9) $5n^2 = -2n + 7$

10) $7x^2 - 18x = -8$

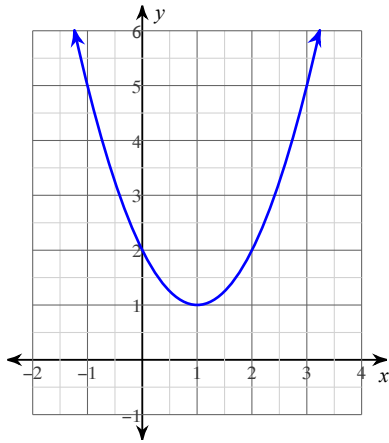
Solve each equation with the quadratic formula.

11) $11k^2 + 5 = -4k$

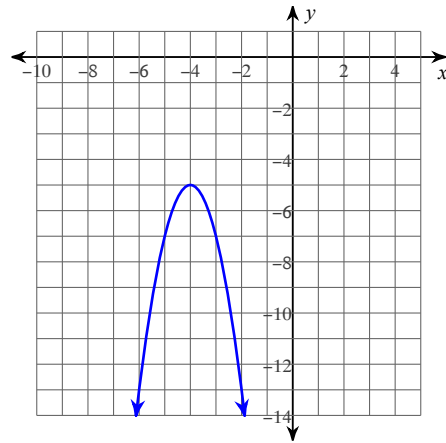
12) $11x^2 = -1$

Use the information provided to write the standard form equation of each parabola.

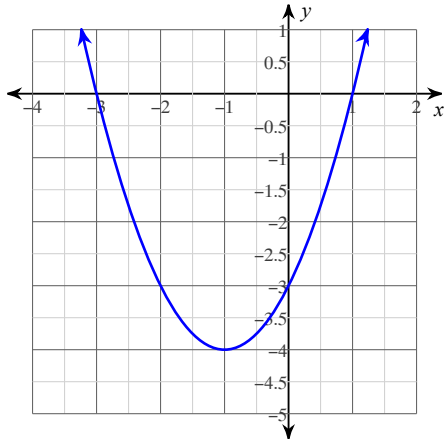
13)



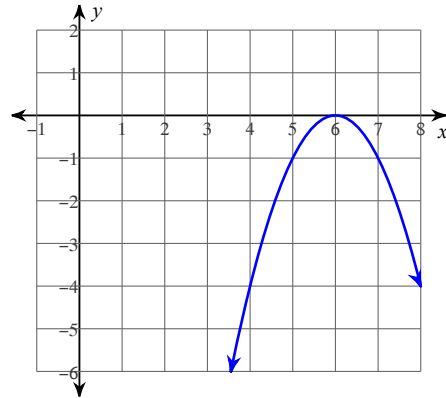
14)



15)



16)



Simplify.

17) $(7 + 5i)(-1 - 5i)$

18) $(-1 - 2i)^2$

19) $\frac{-6 + 10i}{1 - 6i}$

20) $\frac{9 + 5i}{-7 + 10i}$

Chapter 1 Test Review #2

Use the information provided to write the vertex form equation of each parabola.

$$1) y = -\frac{1}{2}x^2 + 3x - \frac{17}{2}$$

$$y = -\frac{1}{2}(x - 3)^2 - 4$$

$$2) y = -x^2 - 2x - 10$$

$$y = -(x + 1)^2 - 9$$

$$3) y = -11x^2 - 88x - 169$$

$$y = -11(x + 4)^2 + 7$$

$$4) y = -3x^2 - 42x - 153$$

$$y = -3(x + 7)^2 - 6$$

Solve each equation by completing the square.

$$5) v^2 = -16v - 97$$

$$\{-8 + i\sqrt{33}, -8 - i\sqrt{33}\}$$

$$6) a^2 + 10 = -20a$$

$$\{-10 + 3\sqrt{10}, -10 - 3\sqrt{10}\}$$

Solve each equation by factoring.

$$7) 2n^2 + 5 = -7n$$

$$\left\{-\frac{5}{2}, -1\right\}$$

$$8) 5v^2 + 28v = 49$$

$$\left\{\frac{7}{5}, -7\right\}$$

$$9) 5n^2 = -2n + 7$$

$$\left\{-\frac{7}{5}, 1\right\}$$

$$10) 7x^2 - 18x = -8$$

$$\left\{\frac{4}{7}, 2\right\}$$

Solve each equation with the quadratic formula.

$$11) 11k^2 + 5 = -4k$$

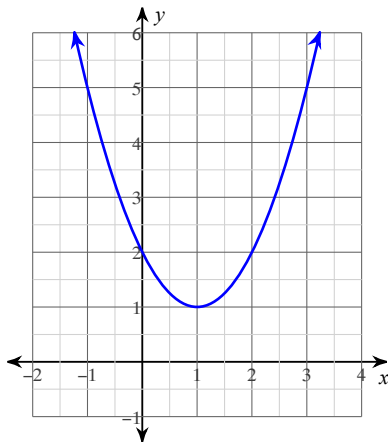
$$\left\{\frac{-2 + i\sqrt{51}}{11}, \frac{-2 - i\sqrt{51}}{11}\right\}$$

$$12) 11x^2 = -1$$

$$\left\{\frac{i\sqrt{11}}{11}, -\frac{i\sqrt{11}}{11}\right\}$$

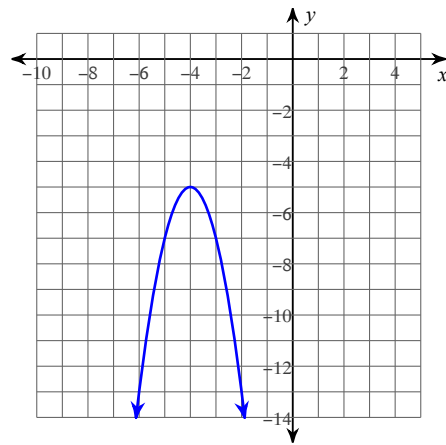
Use the information provided to write the standard form equation of each parabola.

13)



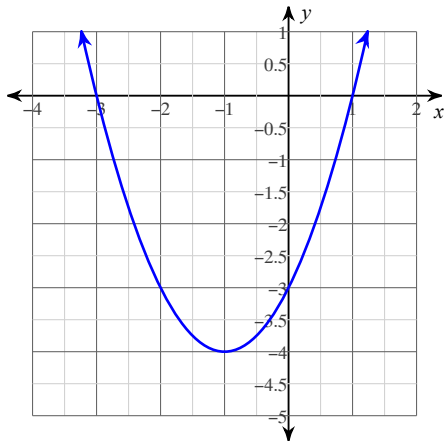
$$y = x^2 - 2x + 2$$

14)



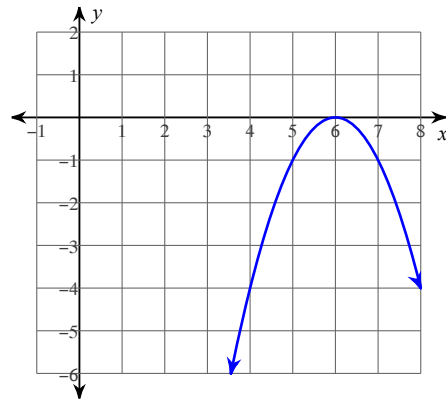
$$y = -2x^2 - 16x - 37$$

15)



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

16)



$$y = -x^2 + 12x - 36$$

Simplify.

17) $(7 + 5i)(-1 - 5i)$

$$18 - 40i$$

18) $(-1 - 2i)^2$

$$-3 + 4i$$

19) $\frac{-6 + 10i}{1 - 6i}$

$$\frac{-66 - 26i}{37}$$

20) $\frac{9 + 5i}{-7 + 10i}$

$$\frac{-13 - 125i}{149}$$