

Leftovers Review: Quadratic Functions

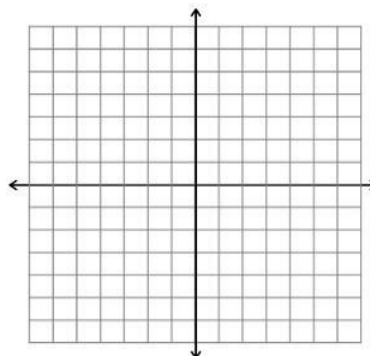
Complete each exercise set. Within each set are problems and answers however one problem will not have an answer given. Match the problem and answers then solve the remaining problem. Turn in your work and solutions for the “Leftover” problem.

Set 1

Leftover _____

Set 2

Leftover _____



Set 3

Leftover _____

Set 4

Leftover _____

Set 5

Leftover _____

Set 6

Leftover _____

Set 7

Leftover _____

Set 8

Leftover _____

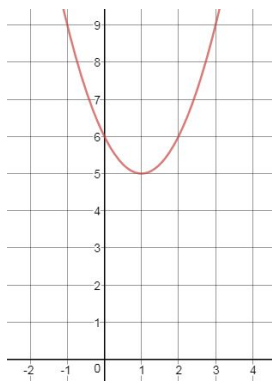
Card Set 1: Find the vertex of each equation.

$$y = 2(x - 1)^2 + 6$$

$$y = x^2 - 6x + 7$$

$$y = -x^2 + 4x - 5$$

$$y = -(1/2)x^2 + 5x - 4.5$$



Answers

(3, -2) (1, 5) (-1, 6) (5, 8)

Card Set 2: Graph each equation.

$$y = 2(x - 1)^2 + 3$$

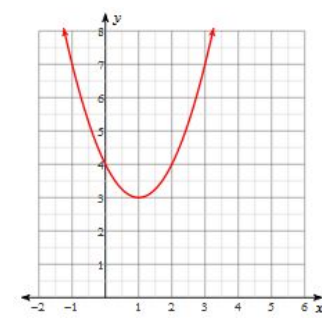
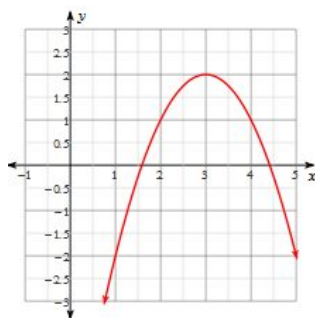
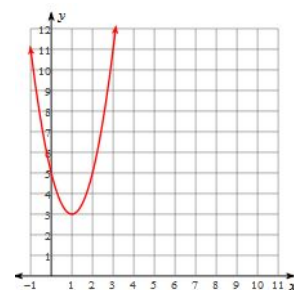
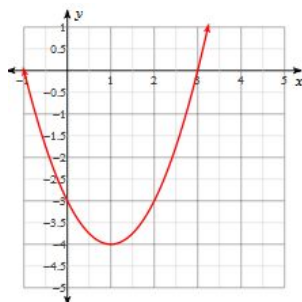
$$y = x^2 - 2x + 4$$

$$y = (x - 1)^2 - 4$$

$$y = -x^2 + 6x - 7$$

$$y = 2x^2 - 8x + 6$$

Answers



Card Set 3: Find the equation for each of the following.

equation has zeros of -2 and 4

through points (-1,2) (0, 0) and (2,8)

vertex (1, 2) through point (2, 3)

x^2 shifted up 1 unit and left 2 units

x^2 shifted down 2 right 1 and reflected over the x-axis

Answers

$$y = 2x^2$$

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

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

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

Card Set 4: Solve each equation by factoring.

$$x^2 + 2x - 3 = 0$$

$$2x^2 - 7x + 3 = 0$$

$$x^2 + 5x = x - 4$$

$$x^2 - 49 = 3x + 5$$

$$6x^2 + 11x - 35 = 0$$

Answers

-7/2 -3 -2 1/2 1 5/3 3

Card Set 5: Solve each equation by completing the square.

$$5r^2 - 12r + 18 = -9$$

$$v^2 - 10v - 94 = -8$$

$$p^2 - 14p + 44 = -4$$

$$x^2 + 14x + 43 = 10$$

$$p^2 - 6p - 2 = 3$$

Answers

$$\{9, 3\} \quad \{-3, -11\} \quad \{3 \pm \sqrt{14}\} \quad \{5 \pm \sqrt{111}\}$$

Card Set 6: Simplify each complex expression.

$$(2 + 3i) + (4 - 2i)$$

$$(2 + 6i)(5 - i)$$

$$(7 - 2i) - (3 - 5i)$$

$$\frac{4 + 2i}{1 + 3i}$$

$$(3 + 2i)(3 - 2i)$$

Answers

$$1 - i \quad 4 + 3i \quad 6 + i \quad 16 - 32i$$

Cards Set 7: Solve each equation using the quadratic formula.

$$2b^2 = -4 - 9b$$

$$a^2 + 10 = 0$$

$$x^2 + 7x = 8$$

$$3x^2 - 3x - 4 = 0$$

$$4b^2 + 7b = -9$$

Answers

$$\{-\frac{1}{2}, -4\} \quad \{\pm i\sqrt{10}\} \quad \{1, -8\} \quad \{\frac{3 \pm \sqrt{57}}{6}\}$$

Card Set 8: Use the discriminant to find the number and type of solutions.

$$4a^2 - 4a + 7 = 6$$

$$7x^2 + 8x + 13 = 4$$

$$5m^2 - 3m + 6 = 5$$

$$8n^2 + 8n = -2$$

$$-3m^2 + 7m + 9 = 9$$

Answers

$$0 \quad -188 \quad 49 \quad -11$$