

The Quadratic Formula 11.4



Overview of problems



Example Set: A

Write the equations in standard form. Assign the variables a , b , c with the values used in the quadratic formula:

1. $3x^2 + 6x - 10 = 0$

2. $-4x - 2x^2 + 1 = 0$

3. $7x^2 = 5x - 8$

4. $y^2 = 1 + 3y$

5. $4t - 4^2 = 0$



Example Set: B

Solve using the quadratic formula:

1. $x^2 - 2x - 3 = 0$

2. $y^2 - 5y + 5 = 0$

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Example Set: C

Solve the quadratic equations:

1. $5x^2 + 30x + 40 = 0$

2. $6t^2 = 30$

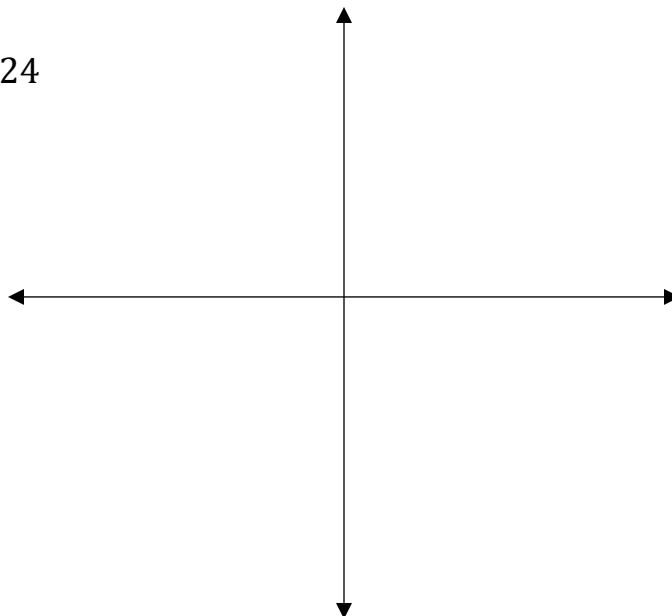
3. $9q^2 + 3q - 2 = 0$

4. $(x - 2)^2 - 16 = 0$

Example Set: D

Graph the quadratic equations. Label the vertex, x-intercepts and y-intercepts:

1. $y = 3x^2 - 18x + 24$

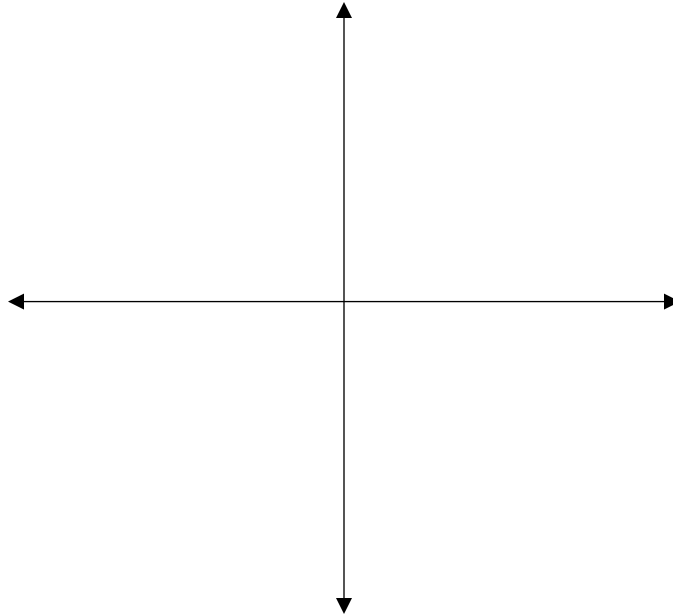


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2. $y = x^2 + x - \frac{3}{4}$



 *Example Set: E*

Solve using the quadratic formula:

1. $18.02x - 3.96x^2 = -4.71x^2 - 1.3$

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Example Set: A - **ANSWER KEY**

Write the equations in standard form. Assign the variables a , b , c with the values used in the quadratic formula:

1. $3x^2 + 6x - 10 = 0$ $a = 3$ $b = 6$ $c = -10$ $3x^2 + 6x - 10 = 0$

2. $-4x - 2x^2 + 1 = 0$ $a = -2$ $b = -4$ $c = 1$ $-2x^2 - 4x + 1 = 0$

3. $7x^2 = 5x - 8$ $a = 7$ $b = -5$ $c = 8$ $7x^2 - 5x + 8 = 0$

4. $y^2 = 1 + 3y$ $a = 1$ $b = -3$ $c = -1$ $y^2 - 3y - 1 = 0$

5. $4t - 4^2 = 0$ $a = -1$ $b = 4$ $c = 0$ $-t^2 + 4t = 0$



Example Set: B- **ANSWER KEY**

Solve using the quadratic formula:

1. $x^2 - 2x - 3 = 0$ $x_1 = 3$ $x_2 = -1$

2. $y^2 - 5y + 5 = 0$ $y = \frac{5 \pm \sqrt{5}}{2}$

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Example Set: C-ANSWER KEY

Solve the quadratic equations:

1. $5x^2 + 30x + 40 = 0$ $x_1 = -2$ $x_2 = -4$

2. $6t^2 = 30$ $t = \pm\sqrt{5}$

3. $9q^2 + 3q - 2 = 0$ $q_1 = \frac{1}{3}$ $q_2 = -\frac{2}{3}$

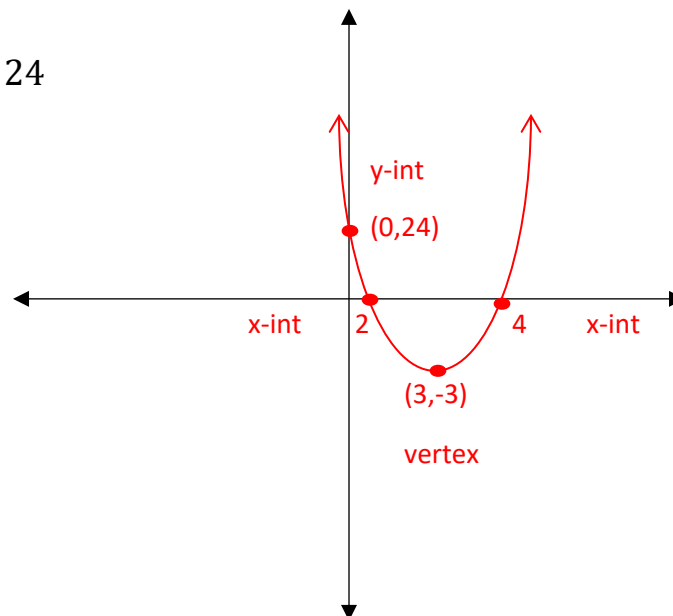
4. $(x - 2)^2 - 16 = 0$ $x_1 = 6$ $x_2 = -2$



Example Set: D-ANSWER KEY

Graph the quadratic equations. Label the vertex, x-intercepts and y-intercepts:

1. $y = 3x^2 - 18x + 24$

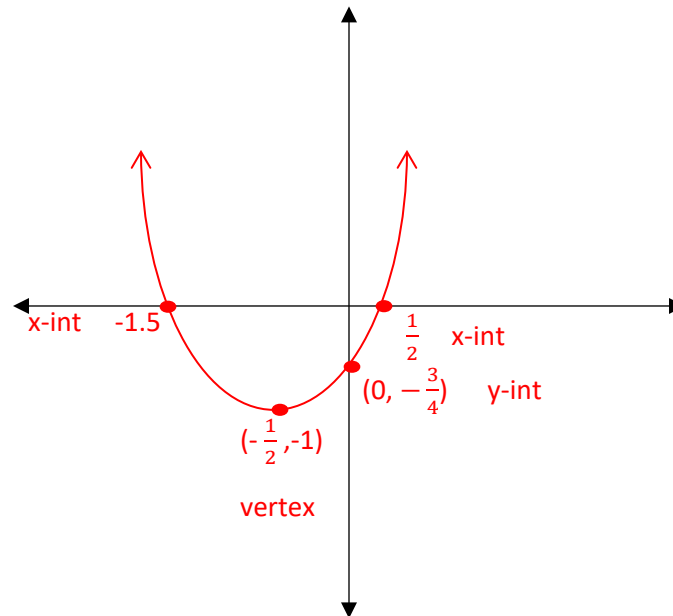


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2. $y = x^2 + x - \frac{3}{4}$



Example Set: E-ANSWER KEY

Solve using the quadratic formula:

1. $18.02x - 3.96x^2 = -4.71x^2 - 1.3$
 $x_1 = -.07\bar{3}$ $x_2 = -23.95\bar{3}$