

A.A.27: Solving Quadratics by Factoring: Understand and apply the multiplication property of zero to solve quadratic equations with integral coefficients and integral roots

- 1 What is the solution set of the equation $3x^2 = 48$?
 - 1) $\{-2, -8\}$
 - 2) $\{2, 8\}$
 - 3) $\{4, -4\}$
 - 4) $\{4, 4\}$
- 2 What is the solution set of the equation $x^2 - 5x = 0$?
 - 1) $\{0, -5\}$
 - 2) $\{0, 5\}$
 - 3) $\{0\}$
 - 4) $\{5\}$
- 3 The solution to the equation $x^2 - 6x = 0$ is
 - 1) 0, only
 - 2) 6, only
 - 3) 0 and 6
 - 4) $\pm\sqrt{6}$
- 4 The solution set for the equation $x^2 - 2x - 15 = 0$ is
 - 1) $\{5, 3\}$
 - 2) $\{5, -3\}$
 - 3) $\{-5, 3\}$
 - 4) $\{-5, -3\}$
- 5 What is the solution set of $m^2 - 3m - 10 = 0$?
 - 1) $\{5, -2\}$
 - 2) $\{2, -5\}$
 - 3) $\{3, -10\}$
 - 4) $\{3, 10\}$
- 6 What is the solution set of the equation $x^2 - 5x - 24 = 0$?
 - 1) $\{-3, 8\}$
 - 2) $\{-3, -8\}$
 - 3) $\{3, 8\}$
 - 4) $\{3, -8\}$
- 7 What is the solution set for the equation $x^2 - 5x + 6 = 0$?
 - 1) $\{-6, 1\}$
 - 2) $\{6, -1\}$
 - 3) $\{-2, -3\}$
 - 4) $\{2, 3\}$
- 8 What is the solution set of the equation $x^2 + 11x + 28 = 0$?
 - 1) $\{-7, 4\}$
 - 2) $\{-7, -4\}$
 - 3) $\{3, 4\}$
 - 4) $\{-3, -4\}$
- 9 The solution set of the equation $x^2 - 4x - 12 = 0$ is
 - 1) $\{-6, 2\}$
 - 2) $\{-4, 3\}$
 - 3) $\{-2, 6\}$
 - 4) $\{-3, 4\}$
- 10 The solution set for the equation $x^2 - 5x = 6$ is
 - 1) $\{1, -6\}$
 - 2) $\{2, -3\}$
 - 3) $\{-1, 6\}$
 - 4) $\{-2, 3\}$
- 11 The solutions of $x^2 = 16x - 28$ are
 - 1) -2 and -14
 - 2) 2 and 14
 - 3) -4 and -7
 - 4) 4 and 7
- 12 What is the positive solution of the equation $4x^2 - 36 = 0$?
- 13 Solve for x : $x^2 + 2x - 24 = 0$
- 14 Solve for x : $x^2 + 3x - 40 = 0$
- 15 Solve for x : $x^2 + 3x - 28 = 0$
- 16 Solve: $(x - 3)(x + 3) = 6x - 14$

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Answer Section

1 ANS: 3

$$3x^2 = 48$$

$$3x^2 - 48 = 0$$

$$x^2 - 16 = 0$$

$$(x + 4)(x - 4) = 0$$

$$x = -4 \quad x = 4$$

REF: 010215a

2 ANS: 2

$$x^2 - 5x = 0$$

$$x(x - 5) = 0$$

$$x = 0 \quad (x - 5) = 0$$

$$x = 0 \quad x = 5$$

REF: 010727a

3 ANS: 3

$$x^2 - 6x = 0$$

$$x(x - 6) = 0$$

$$x = 0 \quad x = 6$$

REF: 080921ia

4 ANS: 2

$$x^2 - 2x - 15 = 0$$

$$(x - 5)(x + 3) = 0$$

$$x = 5 \quad x = -3$$

REF: 080012a

5 ANS: 1

$$m^2 - 3m - 10 = 0$$

$$(m - 5)(m + 2) = 0$$

$$m = 5 \quad m = -2$$

REF: 080118a

6 ANS: 1

$$x^2 - 5x - 24 = 0$$

$$(x - 8)(x + 3) = 0$$

$$x = 8 \quad x = -3$$

REF: 060313a

7 ANS: 4

$$x^2 - 5x + 6 = 0$$

$$(x - 3)(x - 2) = 0$$

$$x = 3 \quad x = 2$$

REF: 010520a

8 ANS: 2

$$x^2 + 11x + 28 = 0$$

$$(x + 7)(x + 4) = 0$$

$$x = -7 \quad x = -4$$

REF: 060514a

9 ANS: 3

$$x^2 - 4x - 12 = 0$$

$$(x - 6)(x + 2) = 0$$

$$x = 6 \quad x = -2$$

REF: 060725a

10 ANS: 3

$$x^2 - 5x = 6$$

$$x^2 - 5x - 6 = 0$$

$$(x - 6)(x + 1) = 0$$

$$x = 6 \quad x = -1$$

REF: 080525a

11 ANS: 2

$$x^2 - 16x + 28 = 0$$

$$(x - 14)(x - 2) = 0$$

$$x = 14, 2$$

REF: 061311ia

12 ANS:

$$\frac{4x^2}{4} - \frac{36}{4} = \frac{0}{4}$$

$$3. \quad x^2 - 9 = 0$$

$$(x + 3)(x - 3) = 0$$

$$x = -3 \quad x = 3$$

REF: 080733a

13 ANS:

$$x^2 + 2x - 24 = 0$$

$$-6, 4. \quad (x + 6)(x - 4) = 0$$

$$x = -6 \quad x = 4$$

REF: 010637a

14 ANS:

$$x^2 + 3x - 40 = 0$$

$$-8 \text{ and } 5. \quad (x + 8)(x - 5) = 0$$

$$x = -8 \quad x = 5$$

REF: 089926a

15 ANS:

$$x^2 + 3x - 28 = 0$$

$$-7 \text{ and } 4. \quad (x + 7)(x - 4) = 0$$

$$x = -7 \quad x = 4$$

REF: 060229a

16 ANS:

1, 5

REF: 069109a1