

**A.REI.B.4: Solving Quadratics 3**

- 1 What is the solution set of the equation  $x^2 - 5x = 0$ ?
  - 1)  $\{0, -5\}$
  - 2)  $\{0, 5\}$
  - 3)  $\{0\}$
  - 4)  $\{5\}$
  
- 2 The solution to the equation  $x^2 - 6x = 0$  is
  - 1) 0, only
  - 2) 6, only
  - 3) 0 and 6
  - 4)  $\pm\sqrt{6}$
  
- 3 What is the solution set of the equation  $(x - 2)(x - a) = 0$ ?
  - 1)  $-2$  and  $a$
  - 2)  $-2$  and  $-a$
  - 3)  $2$  and  $a$
  - 4)  $2$  and  $-a$
  
- 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 If  $(x - 4)$  is a factor of  $x^2 - x - w = 0$ , then the value of  $w$  is

- 1)  $12$
- 2)  $-12$
- 3)  $3$
- 4)  $-3$

13 Which equation has the solution set  $\{1, 3\}$ ?

- 1)  $x^2 - 4x + 3 = 0$
- 2)  $x^2 - 4x - 3 = 0$
- 3)  $x^2 + 4x + 3 = 0$
- 4)  $x^2 + 4x - 3 = 0$

14 For which equation is the solution set  $\{-5, 2\}$ ?

- 1)  $x^2 + 3x - 10 = 0$
- 2)  $x^2 - 3x = 10$
- 3)  $x^2 + 3x = -10$
- 4)  $x^2 - 3x + 10 = 0$

15 Which equation has the same solutions as

- $2x^2 + x - 3 = 0$
- 1)  $(2x - 1)(x + 3) = 0$
  - 2)  $(2x + 1)(x - 3) = 0$
  - 3)  $(2x - 3)(x + 1) = 0$
  - 4)  $(2x + 3)(x - 1) = 0$

16 What is the solution set of the equation

- $3x^2 - 34x - 24 = 0$ ?
- 1)  $\{-2, 6\}$
  - 2)  $\{-12, \frac{2}{3}\}$
  - 3)  $\{-\frac{2}{3}, 12\}$
  - 4)  $\{-6, 2\}$

17 What are the solutions to the equation

- $3x^2 + 10x = 8$ ?
- 1)  $\frac{2}{3}$  and  $-4$
  - 2)  $-\frac{2}{3}$  and  $4$
  - 3)  $\frac{4}{3}$  and  $-2$
  - 4)  $-\frac{4}{3}$  and  $2$

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**Answer Section**

1 ANS: 2

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

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

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

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

REF: 010727a

2 ANS: 3

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

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

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

REF: 080921ia

3 ANS: 3

REF: 011702ai

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: 1

$$(x - 4)(x + 3) = 0$$

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

REF: 060430a

13 ANS: 1

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

$$(x - 3)(x - 1) = 0$$

$$x = 3 \quad x = 1$$

REF: 010913a

14 ANS: 1

$$x^2 + 3x - 10 = 0$$

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

$$x = -5 \quad x = 2$$

REF: 080825a

15 ANS: 4

REF: 011503ai

16 ANS: 3

$$3x^2 - 34x - 24 = 0$$

$$(3x + 2)(x - 12) = 0$$

$$x = -\frac{2}{3} \quad x = 12$$

REF: 010419a

17 ANS: 1

$$3x^2 + 10x - 8 = 0$$

$$(3x - 2)(x + 4) = 0$$

$$x = \frac{2}{3}, -4$$

REF: 081619ai