Integrated Algebra Practice: A.A.27
www.jmap.org

NAME:_____

P.I. A.A.27: Understand and apply the multiplication property of zero to solve quadratic equations with integral coefficients and integral roots

Solve:

1. $x^2 + x - 30 = 0$

   [A] –6, 5 [B] –5, 6

   [C] –6, –5 [D] 6, 5

2. $x^2 + 2x - 8 = 0$

   [A] –4, 2 [B] –2, 4

   [C] –4, –2 [D] 4, 2

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

   [A] –2, –1 [B] –1, 2

   [C] –2, 1 [D] 2, 1

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

   [A] –1, 3 [B] –3, 1

   [C] 3, 1 [D] –3, –1

5. $x^2 - x - 20 = 0$

   [A] 4, 5 [B] –5, 4

   [C] –4, 5 [D] –4, –5

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

   [A] –5, 2 [B] –2, 5

   [C] –5, –2 [D] 5, 2

7. $x^2 + 7x - 8 = 0$

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

9. $x^2 + 8x + 15 = 0$

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

11. $x^2 + 3x - 54 = 0$

12. $x^2 - 12x + 32 = 0$

13. $49x = x^2$

    [A] 0, 49 [B] –7, 7 [C] 0, 7 [D] 1, 49

14. $64x = x^2$

    [A] –8, 8 [B] 0, 64 [C] 0, 8 [D] 1, 64

15. Determine the number of solutions of the equation and solve for them.
$x^2 + 54 = 54$

16. Determine the number of solutions of the equation and solve for them.
$9x^2 + 93 = 193$

17. Which are the solutions to $x^2 + 9x = 36$?

[A] $x = -12, x = 3$ [B] $x = 4, x = 9$ [C] $x = 12, x = -3$ [D] $x = -4, x = 9$

18. Compare the quantity in Column A with the quantity in Column B.

Column A	Column B
the sum of the solutions of $x^2 - 6x = 7$	the sum of the solutions of $x^2 + 8x = -7$

[A] The quantity in Column A is greater. [B] The quantity in Column B is greater.

[C] The two quantities are equal.

[D] The relationship cannot be determined on the basis of the information supplied.

19. Compare the quantity in Column A with the quantity in Column B.

Column A	Column B
the greater solution of $x^2 - 4x - 12 = 0$	the greater solution of $x^2 + 3x + 2 = 0$

[A] The quantity in Column A is greater. [B] The quantity in Column B is greater.

[C] The two quantities are equal.

[D] The relationship cannot be determined on the basis of the information supplied.

Integrated Algebra Practice: A.A.27
www.jmap.org

[1] A

[2] A

[3] C

[4] B

[5] C

[6] A

[7] –8, 1

[8] –2, 3

[9] –5, –3

[10] –6, 1

[11] –9, 6

[12] 4, 8

[13] A

[14] B

[15] one solution: 0

[16] two solutions: $-\frac{10}{3}, \frac{10}{3}$

[17] A

[18] A

[19] A