

4-3 Skills Practice***Solving Quadratic Equations by Factoring***

Write a quadratic equation in standard form with the given root(s).

1. 1, 4

2. 6, -9

3. -5

4. 0, 7

Factor each polynomial.

5. $m^2 + 7m - 18$

6. $2x^2 - 3x - 5$

7. $4z^2 + 4z - 15$

8. $4p^2 + 4p - 24$

9. $3y^2 + 21y + 36$

10. $c^2 - 100$

Solve each equation by factoring.

11. $x^2 = 64$

12. $x^2 - 100 = 0$

13. $x^3 - 3x^2 - 4x - 12 = 0$

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

Solve each equation by factoring.

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

16. $x^2 - 3x = 10$

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

18. $x^2 - 9x = 0$

19. $x^2 - 4x = 21$

20. $2x^2 + 5x - 3 = 0$

21. $4x^2 + 5x - 6 = 0$

22. $3x^2 - 13x = 10$

23. NUMBER THEORY Find two consecutive integers whose product is 272.

Key:

1. $x^2 - 5x + 4 = 0$

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

3. $x^2 + 10x + 25 = 0$

4. $x^2 - 7x = 0$

5. $(m - 2)(m + 9)$

6. $(2x - 5)(x + 1)$

7. $(2z + 5)(2x - 3)$

8. $4(p - 2)(p + 3)$

9. $3(y + 4)(y + 3)$

10. $(c + 10)(c - 10)$

11. $\{-8, 8\}$

12. $\{10, -10\}$

13. $\{-3, 2, -2\}$

14. $\{1, 3\}$

15. $\{1, -3\}$

16. $\{5, -2\}$

17. $\{1, 5\}$

18. $\{0, 9\}$

19. $\{-3, 7\}$

20. $\{1/2, -3\}$

21. $\{3/4, -2\}$

22. $\{-2/3, 5\}$

23. 16 and 17, or -16 and -17