

**LESSON**  
**8.4****Practice A**

For use with the lesson "Solve Polynomial Equations in Factored Form"

**Match the equation with its solutions.**

- |                         |                     |
|-------------------------|---------------------|
| 1. $(x + 4)(x + 5) = 0$ | <b>A.</b> -5 and 4  |
| 2. $(x - 4)(x + 5) = 0$ | <b>B.</b> -5 and -4 |
| 3. $(x - 5)(x - 4) = 0$ | <b>C.</b> 4 and 5   |

**Solve the equation.**

- |                            |                           |                           |
|----------------------------|---------------------------|---------------------------|
| 4. $(x + 6)(x + 2) = 0$    | 5. $(p - 5)(p + 3) = 0$   | 6. $(b - 7)(b - 10) = 0$  |
| 7. $(m - 8)(m + 1) = 0$    | 8. $(a - 9)(a + 9) = 0$   | 9. $(y + 15)(y + 12) = 0$ |
| 10. $(c - 25)(c + 50) = 0$ | 11. $(2z - 2)(z + 3) = 0$ | 12. $(2n - 6)(n - 2) = 0$ |

**Factor out the greatest common monomial factor.**

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|-----------------|------------------|-----------------|
| 13. $4m - 2$    | 14. $5x - 10$    | 15. $6y + 15$   |
| 16. $8x + 8y$   | 17. $7a - 7b$    | 18. $2a + 10b$  |
| 19. $9m - 18n$  | 20. $15p - 3q$   | 21. $12x + 4y$  |
| 22. $2c^2 + 4c$ | 23. $9m^3 + m^2$ | 24. $2w^2 + 4w$ |

**Match the equation with its solutions.**

- |                    |                                |
|--------------------|--------------------------------|
| 25. $4a^2 + a = 0$ | <b>A.</b> 0 and 4              |
| 26. $a^2 + 4a = 0$ | <b>B.</b> 0 and -4             |
| 27. $a^2 - 4a = 0$ | <b>C.</b> 0 and $-\frac{1}{4}$ |

**Solve the equation.**

- |                     |                     |                      |
|---------------------|---------------------|----------------------|
| 28. $a^2 + 8a = 0$  | 29. $n^2 - 7n = 0$  | 30. $2w^2 + 2w = 0$  |
| 31. $3p^2 - 3p = 0$ | 32. $4c^2 - 8c = 0$ | 33. $5x^2 + 10x = 0$ |

- 34. Hot Air Balloon** An object is dropped from a hot-air balloon 1296 feet above the ground. The height of the object is given by

$$h = -16(t - 9)(t + 9)$$

where the height  $h$  is measured in feet, and the time  $t$  is measured in seconds.

After how many seconds will the object hit the ground?

- 35. Kickball** A kickball is kicked upward with an initial vertical velocity of 3.2 meters per second. The height of the ball is given by

$$h = -9.8t^2 + 3.2t$$

where the height  $h$  is measured in meters, and the time  $t$  is measured in seconds.

After how many seconds does the ball land?