

ARE YOU READY?

Vocabulary

Match each term on the left with a definition on the right.

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|-------------------|--|
| 1. factoring | A. the process of writing a number or an algebraic expression as a product |
| 2. quadratic | B. the x -coordinate(s) of the point(s) where a graph intersects the x -axis |
| 3. trinomial | C. a polynomial with three terms |
| 4. x -intercept | D. a polynomial with degree 2 |
| | E. the first number of an ordered pair of numbers that describes the location of a point on the coordinate plane |

Graph Functions

Graph each function for the given domain.

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| 5. $y = -2x + 8$; D: $\{-4, -2, 0, 2, 4\}$ | 6. $y = (x + 1)^2$; D: $\{-3, -2, -1, 0, 1\}$ |
| 7. $y = x^2 + 3$; D: $\{-2, -1, 0, 1, 2\}$ | 8. $y = 2x^2$; D: all real numbers |

Multiply Binomials

Find each product.

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|----------------------|----------------------|------------------------|
| 9. $(m + 2)(m + 5)$ | 10. $(y - 7)(y + 2)$ | 11. $(2a + 4)(5a + 6)$ |
| 12. $(x + 1)(x + 1)$ | 13. $(t + 5)(t + 5)$ | 14. $(3n - 8)(3n - 8)$ |

Factor Trinomials

Factor each polynomial completely.

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|--------------------|---------------------|---------------------|
| 15. $x^2 - 2x + 1$ | 16. $x^2 - x - 2$ | 17. $x^2 - 6x + 5$ |
| 18. $x^2 - x - 12$ | 19. $x^2 - 9x + 18$ | 20. $x^2 - 7x - 18$ |

Squares and Square Roots

Find each square root.

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|---------------------------|---------------------------|---------------------|
| 21. $\sqrt{36}$ | 22. $\sqrt{121}$ | 23. $-\sqrt{64}$ |
| 24. $\sqrt{16} \sqrt{81}$ | 25. $\sqrt{\frac{9}{25}}$ | 26. $-\sqrt{6(24)}$ |

Solve Multi-Step Equations

Solve each equation.

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|------------------------|----------------------------|----------------------|
| 27. $3m + 5 = 11$ | 28. $3t + 4 = 10$ | 29. $5n + 13 = 28$ |
| 30. $2(k - 4) + k = 7$ | 31. $10 = \frac{r}{3} + 8$ | 32. $2(y - 6) = 8.6$ |