

4 Quadratic Functions and Factoring



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| 2A.4.A | 4.1 Graph Quadratic Functions in Standard Form |
| 2A.4.B | 4.2 Graph Quadratic Functions in Vertex or Intercept Form |
| 2A.8.D | 4.3 Solve $x^2 + bx + c = 0$ by Factoring |
| 2A.2.A | 4.4 Solve $ax^2 + bx + c = 0$ by Factoring |
| 2A.8.D | 4.5 Solve Quadratic Equations by Finding Square Roots |
| 2A.2.B | 4.6 Perform Operations with Complex Numbers |
| 2A.5.E | 4.7 Complete the Square |
| 2A.8.B | 4.8 Use the Quadratic Formula and the Discriminant |
| 2A.8.D | 4.9 Graph and Solve Quadratic Inequalities |
| 2A.8.A | 4.10 Write Quadratic Functions and Models |



Before

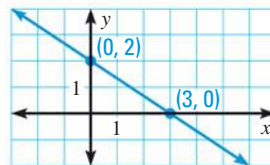
In previous chapters, you learned the following skills, which you'll use in Chapter 4: evaluating expressions, graphing functions, and solving equations.

Prerequisite Skills

VOCABULARY CHECK

Copy and complete the statement.

1. The **x-intercept** of the line shown is ?.
2. The **y-intercept** of the line shown is ?.



SKILLS CHECK

Evaluate the expression when $x = -3$. (Review p. 10 for 4.1, 4.7.)

3. $-5x^2 + 1$
4. $x^2 - x - 8$
5. $(x + 4)^2$
6. $-3(x - 7)^2 + 2$

Graph the function and label the vertex. (Review p. 123 for 4.2.)

7. $y = |x| + 2$
8. $y = |x - 3|$
9. $y = -2|x|$
10. $y = |x - 5| + 4$

Solve the equation. (Review p. 18 for 4.3, 4.4.)

11. $x + 8 = 0$
12. $3x - 5 = 0$
13. $2x + 1 = x$
14. $4(x - 3) = x + 9$



TEXAS @HomeTutor Prerequisite skills practice at classzone.com