

11 CHAPTER REVIEW



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- Multi-Language Glossary
- Vocabulary practice

REVIEW KEY VOCABULARY

- radical expression, p. 710
- radical function, p. 710
- square root function, p. 710
- parent square root function, p. 710
- simplest form of a radical expression, p. 719
- rationalizing the denominator, p. 721
- radical equation, p. 729
- extraneous solution, p. 730
- hypotenuse, legs of a right triangle, p. 737
- Pythagorean theorem, p. 737
- distance formula, p. 744
- midpoint, midpoint formula, p. 745

VOCABULARY EXERCISES

1. Describe how the graph of the function $y = 3\sqrt{x}$ compares with the graph of the parent square root function.
2. Describe the steps you would take to rationalize the denominator of a radical expression.

Tell which theorem or formula you would use to complete the exercise.

3. Tell whether a triangle with side lengths 2, 4, and 6 is a right triangle.
4. The point $(b, 4)$ is 10 units away from the point $(5, 10)$. Find b .

REVIEW EXAMPLES AND EXERCISES

Use the review examples and exercises below to check your understanding of the concepts you have learned in each lesson of Chapter 11.

11.1 Graph Square Root Functions

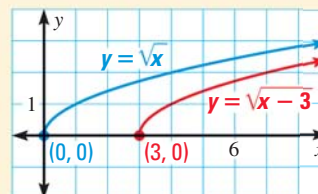
pp. 710–716

EXAMPLE

Graph the function $y = \sqrt{x - 3}$ and identify its domain and range. Compare the graph with the graph of $y = \sqrt{x}$.

To graph the function, make a table, plot the points, and draw a smooth curve through the points. The domain is $x \geq 3$.

x	3	4	5	6
y	0	1	1.4	1.7



The range is $y \geq 0$. The graph of $y = \sqrt{x - 3}$ is a horizontal translation (of 3 units to the right) of the graph of $y = \sqrt{x}$.

EXERCISES

Graph the function and identify its domain and range. Compare the graph with the graph of $y = \sqrt{x}$.

5. $y = -2\sqrt{x}$

6. $y = \sqrt{x} + 7$

7. $y = \sqrt{x + 7}$

EXAMPLES 2, 3, and 4

on pp. 711–712
for Exs. 5–7