# 4 Chapter 4 Practice Test

***Mathematics 10,* pages 199–201**

**Suggested Timing**
40–50 min

**Blackline Masters**
BLM 4–10 Chapter 4 Test

## Planning Notes

Have students start the practice test by writing the question numbers in their notebook. Have them indicate which questions they need a little help with, a lot of help with, or no help with. Have students first complete the questions they know they can do, followed by those they know something about. Finally, have students do their best on the questions that they are struggling with. If the assignment is done in class, consider posting correct solutions after students have had an opportunity to complete the test. Encourage students to compare their solutions.

This practice test can be assigned as an in-class or take-home assignment. Provide students with the number of questions they can comfortably do in one class. These are the minimum questions that will meet the related curriculum outcomes: #1, 2, 4–7, and 9–13.

## Study Guide

| Question(s) | Section(s) | Refer to | The student can … |
|---|---|---|---|
| #1 | 4.1 | Example 1 | ✓ determine the square root of a perfect square and explain the process<br>✓ determine the cube root of a perfect cube and explain the process |
| #2 | 4.2 | Link the Ideas<br>Example 2<br>Key Ideas | ✓ convert a power with a negative exponent to an equivalent power with a positive exponent<br>✓ apply the exponent laws to expressions using rational numbers or variables as bases and integers as exponents |
| #3, 4 | 4.2 | Examples 3, 4 | ✓ solve problems that involve powers with integral exponents |
| #5 | 4.4 | Example 3 | ✓ convert between mixed radicals and entire radicals |
| #6 | 4.4 | Example 2<br>Key Ideas | ✓ convert between powers with rational exponents and radicals |
| #7 | 4.4 | Example 6 | ✓ solve problems involving radicals |
| #8 | 4.1 | Example 2 | ✓ determine the cube root of a perfect cube and explain the process<br>✓ solve problems involving square roots or cube roots |
| #9 | 4.4 | Link the Ideas<br>Key Ideas | ✓ represent, identify, and simplify irrational numbers |
| #10 | 4.1 | Example 2 | ✓ solve problems involving square roots or cube roots |
| #11 | 4.3 | Link the Ideas<br>Example 1<br>Key Ideas | ✓ apply the exponent laws to expressions using rational numbers or variables as bases and rational exponents |
| #12 | 4.3 | Example 3 | ✓ solve problems that involve powers with rational exponents |
| #13 | 4.4 | Example 6 | ✓ solve problems involving radicals |
| #14 | 4.3 | Investigate<br>Example 3 | ✓ solve problems that involve powers with rational exponents |
| #15 | 4.4 | Example 5 | ✓ represent, identify, and simplify irrational numbers |

| Assessment | Supporting Learning |
|---|---|
| **Assessment *as* Learning** | |
| **Chapter 4 Self-Assessment**<br>Have students review their earlier responses in the What I Need to Work On section of their Foldable. | • Have students use their responses on the practice test and work they completed earlier in the chapter to identify areas in which they may need to reinforce their understanding of skills or concepts. Before the chapter test, coach them in the areas in which they are having difficulties. |
| **Assessment *of* Learning** | |
| **Chapter 4 Test**<br>After students complete the practice test, you may wish to **use BLM 4–10 Chapter 4 Test** as a summative assessment. | • Consider allowing students to use their Foldable. |