

Unit 8: Pythagorean Theorem and Irrational Numbers

PRACTICE

Name: _____ Date: _____

Solve each problem and write your exact answer on the line. Show square roots, cube roots, and coordinates in simplest form.

1. Evaluate $\sqrt{81}$.

Answer: _____

2. Evaluate the cube root of 64.

Answer: _____

3. A right triangle has legs of length 6 and 8. Find the length of the hypotenuse.

Answer: _____

4. A right triangle has one leg of length 9 and hypotenuse 15. Find the length of the other leg.

Answer: _____

5. Evaluate $\sqrt{144} + \sqrt{25}$.

Answer: _____

6. Solve for the positive value of x : $x^2 = 49$.

Answer: _____

7. Solve for x : $x^3 = 27$.

Answer: _____

8. Find the distance between the points (1, 2) and (4, 6) in the coordinate plane.

Answer: _____

9. A rectangular box has length 3, width 4, and height 12. Find the length of the interior diagonal from one corner to the opposite corner (use $d = \sqrt{l^2 + w^2 + h^2}$).

Answer: _____

10. Is $\sqrt{50}$ rational or irrational? Answer 'rational' or 'irrational'.

Answer: _____

11. A right triangle has both legs of length 5. Find the square of the hypotenuse (the value of the hypotenuse squared).

Answer: _____

12. Evaluate $\sqrt{16 \times 9}$.

Answer: _____