

Unit 4: Right Triangle Trigonometry

PRACTICE

Name: _____ Date: _____

Show your work and round decimal answers to the nearest tenth unless told otherwise.

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

Answer: _____

2. A right triangle has one leg of length 5 and a hypotenuse of length 13. Find the length of the other leg.

Answer: _____

3. In a right triangle, the side opposite angle A has length 7 and the hypotenuse has length 25. Find $\sin(A)$ as a fraction.

Answer: _____

4. In a right triangle, the side adjacent to angle B has length 9 and the hypotenuse has length 15. Find $\cos(B)$ as a fraction.

Answer: _____

5. In a right triangle, the side opposite angle C has length 8 and the side adjacent to angle C has length 15. Find $\tan(C)$ as a fraction.

Answer: _____

6. In a right triangle, angle $X = 30^\circ$ and the hypotenuse has length 20. Find the length of the side opposite angle X. (Use $\sin(30^\circ) = 0.5$.)

Answer: _____

7. In a right triangle, angle $Y = 60^\circ$ and the side adjacent to angle Y has length 4. Find the length of the side opposite angle Y. Round to the nearest tenth. (Use $\tan(60^\circ) = 1.732$.)

Answer: _____

8. A right triangle has legs of length 9 and 12. Find the length of the hypotenuse.

Answer: _____

9. In a right triangle, angle A has $\sin(A) = \frac{3}{5}$. Find $\cos(A)$ as a fraction. (The triangle has a 3-4-5 side pattern.)

Answer: _____

10. Find the length x of the side opposite a 45° angle in a right triangle whose hypotenuse is 10. Round to the nearest tenth. (Use $\sin(45^\circ) = 0.707$.)

Answer: _____

11. A ladder leans against a wall, making a 70° angle with the ground. The ladder is 12 feet long. How high up the wall does it reach? Round to the nearest tenth. (Use $\sin(70^\circ) = 0.940$.)

Answer: _____

12. A right triangle has legs of length 5 and 5. Find the length of the hypotenuse. Round to the nearest tenth. (Use $\sqrt{2} = 1.414$.)

Answer: _____