

SAT Right Triangles and Trigonometry Worksheet

Name: _____ Date: _____

Circle one answer for each question. Use the blank space for calculations. A calculator is allowed.

1. A right triangle has legs of lengths 6 and 8. What is the hypotenuse length?

- A. 7
- B. 10
- C. 12
- D. 14

2. A right triangle has hypotenuse 13 and one leg 5. What is the other leg?

- A. 8
- B. 10
- C. 12
- D. 18

3. In a 45-45-90 triangle, each leg has length 4. What is the hypotenuse length?

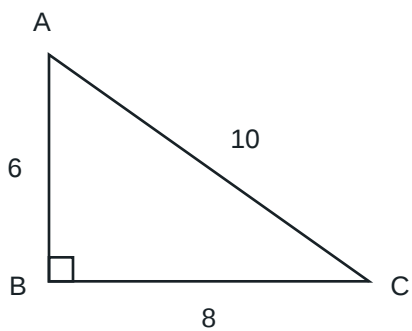
- A. 4
- B. $4\sqrt{2}$
- C. 8
- D. $8\sqrt{2}$

4. In a 30-60-90 triangle, the side opposite 30° is 5. What is the hypotenuse length?

- A. 5
- B. $5\sqrt{3}$
- C. 10
- D. 15

5. For an acute angle A in a right triangle, the opposite side is 3 and the hypotenuse is 5. What is $\sin(A)$?
- A. $\frac{3}{5}$
 - B. $\frac{4}{5}$
 - C. $\frac{3}{4}$
 - D. $\frac{5}{3}$
6. For an acute angle B in a right triangle, the adjacent leg is 8 and the hypotenuse is 17. What is $\cos(B)$?
- A. $\frac{8}{15}$
 - B. $\frac{8}{17}$
 - C. $\frac{15}{17}$
 - D. $\frac{17}{8}$

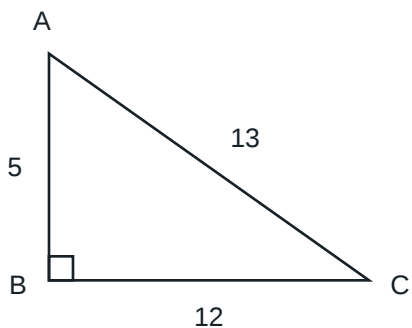
7.



In the triangle shown, what is $\sin(A)$?

- A. $\frac{3}{5}$
- B. $\frac{4}{5}$
- C. $\frac{3}{4}$
- D. $\frac{5}{4}$

8.



In the triangle shown, what is $\tan(C)$?

- A. $\frac{5}{13}$
- B. $\frac{12}{13}$
- C. $\frac{5}{12}$
- D. $\frac{12}{5}$

9. The acute angles A and B of a right triangle are complementary. If $\sin(A) = \frac{7}{25}$, what is $\cos(B)$?
- A. $\frac{7}{25}$
 - B. $\frac{24}{25}$
 - C. $\frac{7}{24}$
 - D. $\frac{25}{7}$
10. A 10-foot ladder forms a right triangle with a vertical wall and level ground. Its base is 6 feet from the wall. How high does it reach?
- A. 4 feet
 - B. 6 feet
 - C. 8 feet
 - D. 16 feet

11. A right triangle has one acute angle of 35° . What is the other acute angle?

- A. 35°
- B. 55°
- C. 65°
- D. 145°

12. Two similar right triangles have hypotenuse lengths 10 and 15. A leg in the smaller triangle is 4. What is the corresponding leg in the larger triangle?

- A. 5
- B. 6
- C. 8
- D. 9