DELAWARE GEOMETRY · UNIT 3 · 25 QUESTIONS

Trigonometry and Measurement — Practice Test

This practice test was made by AI and there may be mistakes. If a question or answer looks wrong, use the Flag a mistake button to let Brett know so he can fix it.

1 **In a 45-45-90 triangle, each leg is 7. The hypotenuse is**

- **A** 14
- **B** $7\sqrt{2}$
- **C** $7\sqrt{3}$
- **D** 7

Understand It with Pulse | Flag a mistake

2 **A right triangle has legs of lengths 9 and 12. The hypotenuse has length**

- A 17
- B 14
- C 15
- D 21

Understand It with Pulse | Flag a mistake

3 **Two angles of a triangle measure 69° and 34°. The third angle measures**

- A 87°
- B 67°
- C 103°
- D 77°

Understand It with Pulse | Flag a mistake

4 An exterior angle of a triangle has remote interior angles measuring 68° and 77°. The exterior angle measures

- **A** 145°
- **B** 165°
- **C** 125°
- **D** 35°

Understand It with Pulse | Flag a mistake

5 In a right triangle, the side opposite an acute angle is 3, the adjacent side is 4, and the hypotenuse is 5. The tangent of the angle is

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

Understand It with Pulse | Flag a mistake

6 In a right triangle, the side opposite an acute angle is 5 and the hypotenuse is 13. The sine of the angle is

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

Understand It with Pulse | Flag a mistake

7 A right triangle has legs of lengths 6 and 8. The hypotenuse has length

- **A** 12
- **B** 9
- **C** 14
- **D** 10

Understand It with Pulse | Flag a mistake

8 **Two angles of a triangle measure 56° and 35°. The third angle measures**

A 89°

B 99°

C 79°

D 91°

Understand It with Pulse | Flag a mistake

9 **An exterior angle of a triangle has remote interior angles measuring 38° and 44°. The exterior angle measures**

A 102°

B 82°

C 62°

D 98°

Understand It with Pulse | Flag a mistake

10 In a right triangle, the side opposite an acute angle is 9, the adjacent side is 12, and the hypotenuse is 15. The sine of the angle is

- **A** $\frac{12}{15}$
- **B** $\frac{9}{12}$
- **C** $\frac{9}{15}$
- **D** $\frac{15}{9}$

Understand It with Pulse | Flag a mistake

11 In a 30-60-90 triangle, the shortest side is 3. The hypotenuse is

- **A** 8
- **B** 3
- **C** 4
- **D** 6

Understand It with Pulse | Flag a mistake

12 **Two angles of a triangle measure 63° and 91°. The third angle measures**

- A 36°
- B 26°
- C 16°
- D 154°

Understand It with Pulse | Flag a mistake

13 **An exterior angle of a triangle has remote interior angles measuring 48° and 41°. The exterior angle measures**

- A 109°
- B 69°
- C 89°
- D 91°

Understand It with Pulse | Flag a mistake

14 In a right triangle, the side opposite an acute angle is 6, the adjacent side is 8, and the hypotenuse is 10. The tangent of the angle is

A $\frac{8}{6}$

B $\frac{6}{10}$

C $\frac{8}{10}$

D $\frac{6}{8}$

Understand It with Pulse | Flag a mistake

15 In a 45-45-90 triangle, each leg is 3. The hypotenuse is

A $3\sqrt{2}$

B 6

C $3\sqrt{3}$

D 3

Understand It with Pulse | Flag a mistake

16 **A right triangle has legs of lengths 9 and 12. The hypotenuse has length**

A 17

B 15

C 14

D 21

Understand It with Pulse | Flag a mistake

17 **Two angles of a triangle measure 30° and 72°. The third angle measures**

A 88°

B 68°

C 78°

D 102°

Understand It with Pulse | Flag a mistake

18 An exterior angle of a triangle has remote interior angles measuring 42° and 67°. The exterior angle measures

- **A** 129°
- **B** 89°
- **C** 71°
- **D** 109°

Understand It with Pulse | Flag a mistake

19 In a right triangle, the side opposite an acute angle is 5, the adjacent side is 12, and the hypotenuse is 13. The tangent of the angle is

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

Understand It with Pulse | Flag a mistake

20 **In a 45-45-90 triangle, each leg is 4. The hypotenuse is**

- A 8
- B $4\sqrt{2}$
- C $4\sqrt{3}$
- D 4

Understand It with Pulse | Flag a mistake

21 **Two angles of a triangle measure 38° and 121°. The third angle measures**

- A 31°
- B 11°
- C 159°
- D 21°

Understand It with Pulse | Flag a mistake

22 An exterior angle of a triangle has remote interior angles measuring 63° and 86°. The exterior angle measures

- **A** 149°
- **B** 169°
- **C** 129°
- **D** 31°

Understand It with Pulse | Flag a mistake

23 In a right triangle, the side opposite an acute angle is 6, the adjacent side is 8, and the hypotenuse is 10. The tangent of the angle is

- **A** $\frac{8}{6}$
- **B** $\frac{6}{8}$
- **C** $\frac{6}{10}$
- **D** $\frac{8}{10}$

Understand It with Pulse | Flag a mistake

24 **In a 30-60-90 triangle, the shortest side is 6. The hypotenuse is**

- A 14
- B 6
- C 12
- D 10

Understand It with Pulse | Flag a mistake

25 **Two angles of a triangle measure 55° and 43°. The third angle measures**

- A 82°
- B 92°
- C 72°
- D 98°

Understand It with Pulse | Flag a mistake

ANSWER KEY

1. B
2. C
3. D
4. A
5. B
6. A
7. D
8. A
9. B
10. C
11. D
12. B
13. C
14. D
15. A
16. B
17. C
18. D
19. A
20. B
21. D
22. A
23. B
24. C
25. A

© 2026 Brett Robbins. All Rights Reserved.