ALBERTA MATH 20-1 · UNIT 2 · 25 QUESTIONS

Trigonometry — 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 **The point (6, 8) lies on the terminal arm of an angle θ in standard position. The exact value of sinθ is**

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

Understand It with Pulse | Flag a mistake

2 **The exact value of sin 30° + cos 60° is**

- **A** $\frac{1}{2}$
- **B** $\frac{\sqrt{3}}{2}$
- **C** 1
- **D** $\sqrt{3}$

Understand It with Pulse | Flag a mistake

3 **The reference angle for an angle of 218° in standard position is**

- **A** 38°
- **B** 52°
- **C** 128°
- **D** 142°

Understand It with Pulse | Flag a mistake

4 In the right triangle ABC shown, angle A measures 40° and the hypotenuse is 25 cm long. The length of the side adjacent to angle A, to the nearest tenth of a centimetre, is

- A 16.1 cm
- B 21.0 cm
- C 32.6 cm
- D 19.2 cm

Understand It with Pulse | Flag a mistake

5 An angle θ in standard position has $\sin\theta = \frac{5}{13}$, and θ is in Quadrant II. If $\cos\theta = -\frac{a}{b}$ in lowest terms, then the value of a + b is

ANSWER _____

Understand It with Pulse | Flag a mistake

6 In △ ABC, ∠ A = 52°, ∠ B = 68°, and side a = 14 cm. The length of side b, to the nearest tenth of a centimetre, is

- A 16.5 cm
- B 11.9 cm
- C 14.7 cm
- D 18.3 cm

Understand It with Pulse | Flag a mistake

7 Two sides of a triangle measure 7 cm and 10 cm, and the angle between them is 63°. The length of the third side, to the nearest tenth of a centimetre, is

- A 7.9 cm
- B 13.0 cm
- C 9.2 cm
- D 10.8 cm

Understand It with Pulse | Flag a mistake

8 In the right triangle ABC shown, point A is on level ground 45 m from the base of a building. The angle of elevation from A to the top of the building is 38°. The height of the building, to the nearest metre, is

- **A** 28 m
- **B** 35 m
- **C** 58 m
- **D** 73 m

Understand It with Pulse | Flag a mistake

9 If $\sin\theta = -\frac{\sqrt{3}}{2}$ and θ is in Quadrant IV, then the measure of θ is

- **A** 60°
- **B** 120°
- **C** 240°
- **D** 300°

Understand It with Pulse | Flag a mistake

10 **In △ ABC, ∠ A = 75°, ∠ B = 40°, and side a = 22 cm. The length of side b, to the nearest tenth of a centimetre, is _____**

ANSWER

Understand It with Pulse | Flag a mistake

11 **In △ ABC, ∠ A = 35°, side a = 9 cm, and side b = 12 cm. The number of different triangles that can be constructed is**

A Two

B One

C Zero

D Cannot be determined

Understand It with Pulse | Flag a mistake

12 In △ ABC, ∠ A = 48°, side a = 6 cm, and side b = 14 cm. The number of different triangles that can be constructed is

- A One
- B Two
- C Zero
- D Cannot be determined

Understand It with Pulse | Flag a mistake

13 In the triangle ABC shown, side AB has length 11 cm, side AC has length 8 cm, and side BC has length 13 cm. The measure of the largest angle of the triangle, to the nearest degree, is

- A 72°
- B 85°
- C 79°
- D 95°

Understand It with Pulse | Flag a mistake

14 **The top of a lighthouse is 60 m above sea level. From the top of the lighthouse, the angle of depression of a boat is 25°. The distance from the base of the lighthouse to the boat, to the nearest metre, is _____**

ANSWER

Understand It with Pulse | Flag a mistake

15 **The right triangle ABC shown represents a 5.2 m ladder leaning against a vertical wall, with its foot at A, 1.6 m from the wall. The angle that the ladder makes with the ground, to the nearest degree, is**

A 18°

B 63°

C 69°

D 72°

Understand It with Pulse | Flag a mistake

16 In △ ABC, ∠ A = 110°, side a = 17 cm, and side b = 13 cm. The measure of angle B, to the nearest degree, is

- A 46°
- B 42°
- C 52°
- D 134°

Understand It with Pulse | Flag a mistake

17 Two ships leave the same port at the same time. One travels 45 km and the other travels 60 km, and the angle between their paths is 72°. The distance between the two ships, to the nearest kilometre, is ____

ANSWER _____

Understand It with Pulse | Flag a mistake

18 For θ = 325°, the primary trigonometric ratio that is positive is

- A Sine
- B Tangent
- C Cosine
- D None of the ratios

Understand It with Pulse | Flag a mistake

19 From a point on the ground, the angle of elevation of the top of a tower is 28°. After walking 30 m directly toward the tower, the angle of elevation is 47°. The height of the tower, to the nearest metre, is

- A 24 m
- B 32 m
- C 28 m
- D 39 m

Understand It with Pulse | Flag a mistake

20 In △ ABC, ∠ A = 40°, side a = 11 cm, and side b = 14 cm. Two different triangles are possible. The larger possible measure of angle B, to the nearest degree, is ____

ANSWER _____

Understand It with Pulse | Flag a mistake

21 A parallelogram has sides of 9 cm and 14 cm, and one diagonal measures 17 cm. The measure of the smaller angle of the parallelogram, to the nearest degree, is

A 76°

B 83°

C 93°

D 87°

Understand It with Pulse | Flag a mistake

22 **A kite is flown on a string that is 85 m long. The string makes an angle of elevation of 52° with the ground, and the string is held 1 m above the ground. The height of the kite above the ground, to the nearest metre, is**

A 68 m

B 52 m

C 67 m

D 85 m

Understand It with Pulse | Flag a mistake

23 **The graph shown is a sine curve. The period of the graph, in degrees, is**

A 180

B 360

C 90

D 720

Understand It with Pulse | Flag a mistake

24 In △ ABC, ∠ A = 38°, ∠ B = 85°, and side b = 19 cm. The length of side a, to the nearest tenth of a centimetre, is

- **A** 13.9 cm
- **B** 16.0 cm
- **C** 11.7 cm
- **D** 21.3 cm

Understand It with Pulse | Flag a mistake

25 Points A and B are on the same side of a river, 50 m apart. A tree T is on the opposite bank. In △ ABT, ∠ A = 64° and ∠ B = 52°. The distance from point A to the tree, to the nearest metre, is ____

ANSWER _____

Understand It with Pulse | Flag a mistake

ANSWER KEY

1. B
2. C
3. A
4. D
5. 25
6. A
7. C
8. B
9. D
10. 14.6
11. A
12. C
13. B
14. 129
15. D
16. A
17. 63
18. C
19. B
20. 125
21. D
22. A
23. B
24. C
25. 44

© 2026 Brett Robbins. All Rights Reserved.