ALBERTA MATH 30-3 · UNIT 2 · 10 QUESTIONS

Trigonometry with the Sine and Cosine Laws — 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 **Three paths in a park form a triangle with sides of 30 m, 40 m, and 45 m. The angle opposite the 45 m side, to the nearest tenth of a degree, is**

- **A** 60.6°
- **B** 78.6°
- **C** 40.8°
- **D** 101.4°

Understand It with Pulse | Flag a mistake

2 **A drafter is given triangle ABC with angle A = 40° , side a = 5 cm (opposite A), and side b = 12 cm. The number of different triangles that fit this description is**

- A 0
- B 1
- C 2
- D 3

Understand It with Pulse | Flag a mistake

3 **A welder is given triangle ABC with angle A = 30° , side a = 8 cm (opposite A), and side b = 16 cm. The number of different triangles that fit this description is**

- A 0
- B 1
- C 2
- D 3

Understand It with Pulse | Flag a mistake

4 Triangle ABT is shown, where T is the top of the tower. Two observers on flat ground stand on opposite sides of a tower, 60 m apart, with the base of the tower between them. Their angles of elevation to the top of the tower are 42° and 58° . The height of the tower, to the nearest tenth of a metre, is

- **A** 51.7 m
- **B** 43.8 m
- **C** 34.6 m
- **D** 40.1 m

Understand It with Pulse | Flag a mistake

5 A vertical antenna mast stands at point O on flat ground. Two guy-wire pegs, A and B , have OA = 7 m, OB = 10 m, and angle AOB = 62° . The distance between the pegs, to the nearest tenth of a metre, is

- **A** 14.7 m
- **B** 12.2 m
- **C** 5.4 m
- **D** 9.1 m

Understand It with Pulse | Flag a mistake

6 **A search aircraft flies 120 km from its base, changes course, and flies 170 km more. The two legs and the straight line back to base form a triangle with an angle of 115° at the turning point. The distance from the aircraft to its base, to the nearest tenth of a kilometre, is**

- A 246.1 km
- B 161.4 km
- C 208.1 km
- D 290.0 km

Understand It with Pulse | Flag a mistake

7 **A triangular road sign has angles A = 92° and B = 39° . Side b , opposite angle B , is 1.8 m. The length of side a , to the nearest tenth of a metre, is**

- A 1.1 m
- B 2.2 m
- C 2.9 m
- D 2.4 m

Understand It with Pulse | Flag a mistake

8 At an excavation site, two straight trenches, 8.5 m and 11.5 m long, meet at an angle of 132° . The distance between their far ends, to the nearest tenth of a metre, is

- A 8.6 m
- B 14.3 m
- C 20.0 m
- D 18.3 m

Understand It with Pulse | Flag a mistake

9 Triangle ABC is shown. On a triangular sailboat race course, side b = 9 km and side c = 13 km meet at angle A = 64° . The measure of angle B , to the nearest tenth of a degree, is

- A 74.2°
- B 38.7°
- C 41.8°
- D 138.2°

Understand It with Pulse | Flag a mistake

10 **A triangular canopy has angles A = 44° and B = 65° . Side b , opposite angle B , is 3.6 m. The length of side a , to the nearest tenth of a metre, is**

- A 4.7 m
- B 3.8 m
- C 2.6 m
- D 2.8 m

Understand It with Pulse | Flag a mistake

ANSWER KEY

1.	B	**5.**	D	**9.**	C
2.	A	**6.**	A	**10.**	D
3.	B	**7.**	C		
4.	C	**8.**	D		

© 2026 Brett Robbins. All Rights Reserved.