NUNAVUT MATH 30-3 · UNIT 2

Trigonometry with the Sine and Cosine Laws — Practice Test

Nunavut Math 30-3 • 10 questions

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°

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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

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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

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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

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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

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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

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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

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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

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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°

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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

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ANSWER KEY

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

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