ALBERTA MATH 20-1 · ALBERTA

Alberta Math 20-1

Practice Test

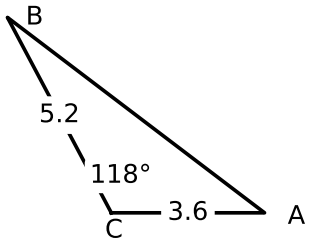
Unit 2: Trigonometry

10 Questions

Original practice test based on the Alberta curriculum. Work through each question, then check your answers at the end.

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.

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Question 1

Two hikers leave the same trailhead, shown in the diagram. The distances they walk and the angle between their paths are labelled in the diagram. The distance between the two hikers, to the nearest tenth of a kilometre, is

A) 6.4 km

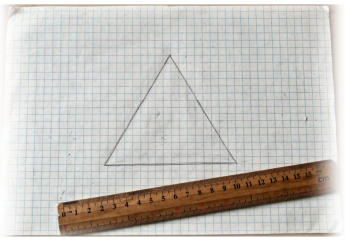
B) 8.1 km

C) 7.6 km

D) 8.8 km

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Question 2

In ΔABC, $\angle A = 30°$, side $a = 10$ cm, and side $b = 20$ cm. The number of different triangles that can be constructed is

A) Two

B) One

C) Zero

D) Cannot be determined

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Question 3

An angle θ in standard position is in Quadrant III, and $\cos\theta = -\frac{7}{25}$. The exact value of $\tan\theta$ is

A) $\frac{7}{24}$

B) $-\frac{24}{7}$

C) $\frac{24}{25}$

D) $\frac{24}{7}$

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Question 4

The sides of a triangular sail measure 5 m , 7 m, and 9 m. The measure of the largest angle of the sail, to the nearest degree, is ____

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Question 5

From point A on level ground, the angle of elevation of the top of a flagpole is 32°. From point B, on the opposite side of the flagpole and in line with A, the angle of elevation is 48°. Points A and B are 60 m apart. The height of the flagpole, to the nearest metre, is

A) 24 m

B) 18 m

C) 30 m

D) 21 m

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Question 6

In ΔABC, $\angle A = 42^\circ$, side $a = 13$ cm, and side $b = 16$ cm. Two different triangles are possible. The smaller possible measure of angle B, to the nearest degree, is

A) 48°

B) 62°

C) 125°

D) 55°

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Question 7

An angle θ in standard position, $0^\circ \leq \theta < 360^\circ$, satisfies $\cos\theta = -\frac{1}{2}$ and θ is in Quadrant II. The measure of θ, in degrees, is ____

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Question 8

A parallelogram has sides of 6 cm and 11 cm, and one diagonal measures 9 cm. The measure of the obtuse angle of the parallelogram, to the nearest degree, is

A) 125°

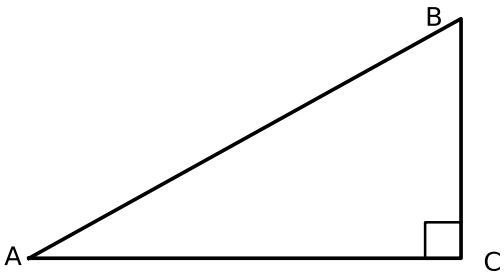
B) 55°

C) 118°

D) 132°

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Question 9

The right triangle *ABC* shown has *A* at a surveyor's instrument, 55 m from the base of a building and 1.7 m above the ground. The angle of elevation from the instrument to the top of the building is 29°. The height of the building, to the nearest tenth of a metre, is

A) 30.5 m

B) 31.4 m

C) 33.9 m

D) 32.2 m

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Question 10

Points A and B are on the same side of a canyon, 120 m apart. A landmark C is on the opposite side. In ΔABC, $\angle A = 58°$ and $\angle B = 74°$. The distance from point A to the landmark, to the nearest metre, is ____

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ANSWER KEY

1. C
2. B
3. D
4. 96
5. A
6. D
7. 120
8. A
9. D
10. 155

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