ALBERTA MATH 10C · UNIT 1 · 10 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 **A roof rises 3.5 m vertically over a horizontal run of 8.0 m. The angle the roof makes with the horizontal, to the nearest tenth of a degree, is**

- A 66.4°
- B 25.9°
- C 20.6°
- D 23.6°

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2 **A ski run drops vertically 240 m over a slope length of 850 m. The triangle shown represents the ski run, with the vertical drop and the slope as two of its sides. The angle the slope makes with the horizontal, to the nearest tenth of a degree, is**

- A 16.4°
- B 73.6°
- C 15.5°
- D 18.2°

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3 **In a right triangle, the hypotenuse is 24.0 cm and an acute angle is 36°. The length of the side opposite the 36° angle, to the nearest tenth of a centimetre, is ____ cm**

ANSWER _____

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4 **From point A on level ground, the angle of elevation of the top of a tower is 33°. After walking 20 m directly toward the tower to point B, the angle of elevation is 48°. The height of the tower, to the nearest tenth of a metre, is**

- A 46.6 m
- B 31.3 m
- C 25.9 m
- D 36.0 m

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5 **A drone hovers 120 m above the ground. The angle of depression from the drone to a car on the ground is 24°. The straight-line distance from the drone to the car, to the nearest tenth of a metre, is**

- A 269.5 m
- B 131.4 m
- C 48.8 m
- D 295.0 m

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6 **Each step of a staircase rises 17.5 cm and has a tread (run) of 28.0 cm. The angle the staircase makes with the horizontal, to the nearest tenth of a degree, is ____°**

ANSWER _____

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7 **The right triangle ABC shown has legs of length 9 cm and 40 cm. The measure of angle A, to the nearest tenth of a degree, is**

A 77.3°

B 13.5°

C 12.7°

D 11.9°

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8 **A fence post 2.0 m tall casts a shadow 3.2 m long. At the same time, a nearby building casts a shadow 28.8 m long. The height of the building is**

- **A** 18.0 m
- **B** 46.1 m
- **C** 16.2 m
- **D** 12.8 m

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9 **A conveyor belt 15.0 m long lifts material to a height of 6.3 m. The angle the belt makes with the horizontal, to the nearest tenth of a degree, is ____°**

ANSWER _____

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10 **In a right triangle, the hypotenuse is 30 cm and an acute angle A measures 35°. The lengths of the side opposite angle A and the side adjacent to angle A, respectively, to the nearest tenth of a centimetre, are**

A Opposite: 24.6 cm Adjacent: 17.2 cm

B Opposite: 17.2 cm Adjacent: 24.6 cm

C Opposite: 23.0 cm Adjacent: 19.3 cm

D Opposite: 17.2 cm Adjacent: 19.3 cm

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ANSWER KEY

1.	D	**5.**	D	**9.**	24.8
2.	A	**6.**	32.0	**10.**	B
3.	14.1	**7.**	C		
4.	B	**8.**	A		

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