NUNAVUT MATH 10-3 · UNIT 4

# Similar Polygons and Trigonometry — Practice Test

**Nunavut Math 10-3 • 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 **At the same time of day, a signpost that is 2.4 m tall casts a shadow 1.6 m long, and a building casts a shadow 20 m long. The height of the building is**

- A 13.3 m
- B 30.0 m
- C 22.4 m
- D 48.0 m

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2 **A 7.5 m ladder leans against a vertical wall. The foot of the ladder is 4.5 m from the base of the wall. The height the ladder reaches up the wall is**

- A 3.0 m
- B 8.7 m
- C 6.0 m
- D 5.5 m

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3 **In triangle ABC shown, side BC has length 15 cm and side AC has length 20 cm. The measure of angle A, to the nearest tenth of a degree, is**

- A 53.1°
- B 48.6°
- C 28.1°
- D 36.9°

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**4** **A kite is flying on a string that is 80 m long. The string is taut, makes an angle of 55° with the horizontal, and is held at ground level. The height of the kite above the ground, to the nearest tenth of a metre, is**

- **A** 65.5 m
- **B** 45.9 m
- **C** 56.0 m
- **D** 97.7 m

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**5** **A scale drawing of a deck uses a scale of 1:20. The deck measures 9 cm long on the drawing. The actual length of the deck is**

- **A** 0.45 m
- **B** 20 m
- **C** 1.8 m
- **D** 18 m

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**6** From the top of a 90 m tower, the angle of depression of a truck is 24°. The horizontal distance from the base of the tower to the truck, to the nearest tenth of a metre, is

- A 36.6 m
- B 40.1 m
- C 221.3 m
- D 202.1 m

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**7** In a right triangle, the hypotenuse is 25 cm and an acute angle is 36°. The length of the side adjacent to the 36° angle, to the nearest tenth of a centimetre, is

- A 14.7 cm
- B 20.2 cm
- C 30.9 cm
- D 18.2 cm

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**8** **A wheelchair ramp rises 0.9 m over a horizontal distance of 10.8 m. The angle the ramp makes with the horizontal, to the nearest tenth of a degree, is**

- **A** 85.2°
- **B** 9.6°
- **C** 4.8°
- **D** 2.4°

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**9** **A rectangular gate is 1.2 m wide and 0.9 m tall. A brace runs diagonally from one corner of the gate to the opposite corner. The length of the brace is**

- **A** 1.0 m
- **B** 2.1 m
- **C** 1.1 m
- **D** 1.5 m

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10 **In a roof truss, a right triangle has an acute angle of 30° at its base. The side opposite the 30° angle is a vertical member 9.0 cm long. The length of the hypotenuse of the triangle is**

A 18.0 cm

B 15.6 cm

C 7.8 cm

D 4.5 cm

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## ANSWER KEY

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

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