Trigonometry and Scale Diagrams — Practice Test

Prince Edward Island Apprenticeship and Workplace Mathematics 11 • 25 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 **A ladder leans against a wall, forming a right triangle with horizontal distance 4 metres and ladder length 5 metres. What is the cosine of the angle with the ground, to two decimal places**

ANSWER _____

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2 **A ramp forms a right triangle with vertical rise 3 metres and sloped length 5 metres. What is the sine of the ramp angle, to two decimal places**

ANSWER _____

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3 **A right triangle has legs 3 metres and 4 metres. What is the length of the hypotenuse in metres**

ANSWER _____

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4 **A scale diagram uses a scale of 1 to 50. A line drawn 4 centimetres long represents a real length of how many centimetres**

ANSWER _____

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5 **A builder checks a corner is square by checking the 3, 4, 5 rule, which uses**

A the Pythagorean theorem

B sine only

C area only

D scale only

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6 **A clinometer is used in the field to measure**

- A distances only
- B areas
- C volumes
- D angles of elevation

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7 **A right triangle with hypotenuse 10 and one leg 6 has the other leg equal to**

- A 4
- B 16
- C 12
- D 8

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8 **A scale diagram keeps all lengths in the same**

- A proportion to real lengths
- B sum
- C difference
- D angle only

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9 **A scale drawing that is smaller than the original has a scale factor**

- A less than 1
- B greater than 1
- C equal to 1
- D equal to 0

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10 **A scale model that is larger than the original has a scale factor**

- **A** less than 1
- **B** equal to 1
- **C** equal to 0
- **D** greater than 1

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11 **A scale of 1 to 100 means 1 centimetre on the drawing represents**

- **A** 1 centimetre in real life
- **B** 100 centimetres in real life
- **C** 100 metres in real life
- **D** 10 centimetres in real life

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12 **A 3, 4, 5 triangle is a right triangle because**

- **A** $3^2 + 4^2 = 5^2$
- **B** 3 + 4 = 5
- **C** 3 × 4 = 5
- **D** 5 - 4 = 3 only

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13 **For an acute angle, cosine decreases as the angle**

- **A** decreases
- **B** stays constant
- **C** increases
- **D** becomes zero always

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14 **If two triangles share two equal angles, they are**

A congruent always

B unrelated

C right triangles always

D similar

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15 **In a right triangle, the tangent of an angle is opposite divided by**

A hypotenuse

B longest side

C adjacent

D perimeter

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16 **In similar triangles, corresponding sides are**

A equal always

B unrelated

C perpendicular

D proportional

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17 **On a map with scale 1 to 50000, 2 centimetres represents**

A 50000 centimetres

B 100000 centimetres

C 25000 centimetres

D 10000 centimetres

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18 **A ladder leans against a wall, forming a right triangle with horizontal distance 8 metres and ladder length 10 metres. What is the cosine of the angle with the ground, to two decimal places**

ANSWER _____

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19 **A ramp forms a right triangle with vertical rise 6 metres and sloped length 10 metres. What is the sine of the ramp angle, to two decimal places**

ANSWER _____

Understand It with Pulse | Flag a mistake

20 **A right triangle has legs 6 metres and 8 metres. What is the length of the hypotenuse in metres**

ANSWER _____

Understand It with Pulse | Flag a mistake

21 **A scale diagram uses a scale of 1 to 100. A line drawn 3 centimetres long represents a real length of how many centimetres**

ANSWER _____

Understand It with Pulse | Flag a mistake

22 **A ladder leans against a wall, forming a right triangle with horizontal distance 12 metres and ladder length 13 metres. What is the cosine of the angle with the ground, to two decimal places**

ANSWER _____

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23 **A ramp forms a right triangle with vertical rise 9 metres and sloped length 15 metres. What is the sine of the ramp angle, to two decimal places**

ANSWER _____

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24 **A right triangle has legs 9 metres and 12 metres. What is the length of the hypotenuse in metres**

ANSWER _____

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25 **A scale diagram uses a scale of 1 to 20. A line drawn 5 centimetres long represents a real length of how many centimetres**

ANSWER _____

Understand It with Pulse | Flag a mistake

ANSWER KEY

1. 0.80
2. 0.60
3. 5
4. 200
5. A
6. D
7. D
8. A
9. A
10. D
11. B
12. A
13. C
14. D
15. C
16. D
17. B
18. 0.80
19. 0.60
20. 10
21. 300
22. 0.92
23. 0.60
24. 15
25. 100

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