Pythagorean Theorem and Right-Triangle Trigonometry — Practice Test

Saskatchewan Workplace and Apprenticeship Mathematics 10 • 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 of length 10 m leans against a wall at 60 degrees to the ground. The height it reaches, in metres, is approximately**

- A 10.7
- B 6.7
- C 8.7
- D 10

Understand It with Pulse | Flag a mistake

2 **A right triangle has legs 6 m and 8 m. The hypotenuse, in metres, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

3 From a point 10 m from the base of a pole, the angle of elevation to the top is 60 degrees. The height of the pole, in metres, is approximately

- **A** 19.3
- **B** 17.3
- **C** 15.3
- **D** 10

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4 In a right triangle, the side adjacent to an acute angle is 36 and the hypotenuse is 45. The cosine of the angle is

- **A** $\frac{4}{5}$
- **B** $\frac{3}{5}$
- **C** $\frac{4}{3}$
- **D** $\frac{3}{4}$

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5 In a right triangle, the side opposite an acute angle is 6 and the hypotenuse is 10. The sine of the angle is

- **A** $\frac{4}{5}$
- **B** $\frac{3}{4}$
- **C** $\frac{3}{5}$
- **D** $\frac{4}{3}$

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6 A right triangle has hypotenuse 20 m and one leg 12 m. The other leg, in metres, is

ANSWER _____

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7 In a right triangle, the side opposite an acute angle is 27 and the side adjacent is 36. The tangent of the angle is

- **A** $\frac{3}{4}$
- **B** $\frac{4}{3}$
- **C** $\frac{3}{5}$
- **D** $\frac{4}{5}$

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8 A ladder of length 10 m leans against a wall at 30 degrees to the ground. The height it reaches, in metres, is approximately

- **A** 7
- **B** 5
- **C** 3
- **D** 10

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9 **A right triangle has legs 24 m and 45 m. The hypotenuse, in metres, is**

ANSWER _____

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10 **From a point 15 m from the base of a pole, the angle of elevation to the top is 60 degrees. The height of the pole, in metres, is approximately**

A 28

B 24

C 15

D 26

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11 In a right triangle, the side adjacent to an acute angle is 15 and the hypotenuse is 17. The cosine of the angle is

- **A** $\frac{8}{17}$
- **B** $\frac{15}{17}$
- **C** $\frac{15}{8}$
- **D** $\frac{8}{15}$

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12 In a right triangle, the side opposite an acute angle is 18 and the hypotenuse is 30. The sine of the angle is

- **A** $\frac{3}{5}$
- **B** $\frac{4}{5}$
- **C** $\frac{3}{4}$
- **D** $\frac{4}{3}$

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13 **A right triangle has hypotenuse 15 m and one leg 9 m. The other leg, in metres, is**

ANSWER _____

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14 **In a right triangle, the side opposite an acute angle is 15 and the side adjacent is 36. The tangent of the angle is**

A $\frac{12}{5}$

B $\frac{5}{13}$

C $\frac{12}{13}$

D $\frac{5}{12}$

Understand It with Pulse | Flag a mistake

15 **A ladder of length 25 m leans against a wall at 30 degrees to the ground. The height it reaches, in metres, is approximately**

- A 14.5
- B 10.5
- C 12.5
- D 25

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16 **A right triangle has legs 27 m and 36 m. The hypotenuse, in metres, is**

ANSWER _____

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17 From a point 10 m from the base of a pole, the angle of elevation to the top is 30 degrees. The height of the pole, in metres, is approximately

- **A** 5.8
- **B** 7.8
- **C** 3.8
- **D** 10

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18 In a right triangle, the side adjacent to an acute angle is 12 and the hypotenuse is 13. The cosine of the angle is

- **A** $\frac{5}{13}$
- **B** $\frac{12}{5}$
- **C** $\frac{12}{13}$
- **D** $\frac{5}{12}$

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19 In a right triangle, the side opposite an acute angle is 12 and the hypotenuse is 20. The sine of the angle is

- **A** $\frac{3}{5}$
- **B** $\frac{4}{5}$
- **C** $\frac{3}{4}$
- **D** $\frac{4}{3}$

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20 A right triangle has hypotenuse 13 m and one leg 5 m. The other leg, in metres, is

ANSWER _____

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21 **A ladder of length 20 m leans against a wall at 60 degrees to the ground. The height it reaches, in metres, is approximately**

- A 19.3
- B 15.3
- C 17.3
- D 20

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22 **A right triangle has legs 10 m and 24 m. The hypotenuse, in metres, is**

ANSWER _____

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23 From a point 15 m from the base of a pole, the angle of elevation to the top is 30 degrees. The height of the pole, in metres, is approximately

- **A** 10.7
- **B** 6.7
- **C** 15
- **D** 8.7

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24 In a right triangle, the side adjacent to an acute angle is 4 and the hypotenuse is 5. The cosine of the angle is

- **A** $\frac{4}{5}$
- **B** $\frac{3}{5}$
- **C** $\frac{4}{3}$
- **D** $\frac{3}{4}$

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25 **In a right triangle, the side opposite an acute angle is 3 and the hypotenuse is 5. The sine of the angle is**

A $\frac{4}{5}$

B $\frac{3}{4}$

C $\frac{3}{5}$

D $\frac{4}{3}$

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ANSWER KEY

1. C
2. 10
3. B
4. A
5. C
6. 16
7. A
8. B
9. 51
10. D
11. B
12. A
13. 12
14. D
15. C
16. 45
17. A
18. C
19. A
20. 12
21. C
22. 26
23. D
24. A
25. C

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