Trigonometry: Trigonometric Ratios, 25-question test — 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 right triangle has opposite side 3 and hypotenuse 5. The sine ratio is**

Question 1

A right triangle has opposite side 3 and hypotenuse 5. The sine ratio is

A) $\frac{4}{5}$ B) $\frac{3}{5}$

C) $\frac{3}{4}$ D) $\frac{5}{3}$

- **A** 3/5
- **B** 4/5
- **C** 3/4
- **D** 5/3

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2 A right triangle has opposite side 6 and hypotenuse 10. The sine ratio is

Question 2

A right triangle has opposite side 6 and hypotenuse 10. The sine ratio is

A) $\frac{8}{10}$ B) $\frac{6}{10}$

C) $\frac{6}{8}$ D) $\frac{10}{6}$

- **A** 8/10
- **B** 6/10
- **C** 6/8
- **D** 10/6

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3 A right triangle has opposite side 5 and hypotenuse 13. The sine ratio is

Question 3

A right triangle has opposite side 5 and hypotenuse 13. The sine ratio is

A) $\frac{12}{13}$ B) $\frac{5}{12}$

C) $\frac{5}{13}$ D) $\frac{13}{5}$

- **A** 12/13
- **B** 5/12
- **C** 5/13
- **D** 13/5

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4 A right triangle has opposite side 6 and hypotenuse 10. The sine as a decimal is

Question 4

A right triangle has opposite side 6 and hypotenuse 10. The sine as a decimal is

ANSWER _____

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5

A right triangle has adjacent side 8 and hypotenuse 10. The cosine as a decimal is

Question 5

A right triangle has adjacent side 8 and hypotenuse 10. The cosine as a decimal is

ANSWER

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6

A right triangle has opposite side 3 and adjacent side 4. The tangent as a decimal is

Question 6

A right triangle has opposite side 3 and adjacent side 4. The tangent as a decimal is

ANSWER

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7

A right triangle has opposite side 12 and adjacent side 5. The tangent as a decimal is

Question 7

A right triangle has opposite side 12 and adjacent side 5. The tangent as a decimal is

ANSWER

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8 In a right triangle sine of an angle equals

Question 8

In a right triangle sine of an angle equals

A) adjacent over hypotenuse

B) opposite over adjacent

C) hypotenuse over opposite

D) opposite over hypotenuse

A adjacent over hypotenuse

B opposite over adjacent

C hypotenuse over opposite

D opposite over hypotenuse

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9 In a right triangle cosine of an angle equals

Question 9

In a right triangle cosine of an angle equals

A) adjacent over hypotenuse

B) opposite over hypotenuse

C) opposite over adjacent

D) hypotenuse over adjacent

A adjacent over hypotenuse

B opposite over hypotenuse

C opposite over adjacent

D hypotenuse over adjacent

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10 In a right triangle tangent of an angle equals

Question 10

In a right triangle tangent of an angle equals

A) adjacent over hypotenuse

B) opposite over adjacent

C) opposite over hypotenuse

D) hypotenuse over opposite

- **A** adjacent over hypotenuse
- **B** opposite over adjacent
- **C** opposite over hypotenuse
- **D** hypotenuse over opposite

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11 The sine of 30 degrees is

Question 11

The sine of 30 degrees is

A) 1

B) 0

C) 0.5

D) 0.866

- **A** 1
- **B** 0
- **C** 0.5
- **D** 0.866

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12 The cosine of 60 degrees is

Question 12

The cosine of 60 degrees is

A) 1

B) 0

C) 0.866

D) 0.5

A 1

B 0

C 0.866

D 0.5

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13

The tangent of 45 degrees is

Question 13

The tangent of 45 degrees is

A) 1

B) 0

C) 0.5

D) 0.866

A 1

B 0

C 0.5

D 0.866

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14 The sine of 90 degrees is

Question 14

The sine of 90 degrees is

A) 0

B) 1

C) 0.5

D) 0.866

A 0

B 1

C 0.5

D 0.866

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15 To find an unknown angle from a trig ratio a student uses the

Question 15

A student knows the sine of an unknown angle is 0.5. To find the angle itself, the student uses the

A) Pythagorean theorem only

B) angle sum only

C) inverse trig ratio

D) area formula

- **A** Pythagorean theorem only
- **B** angle sum only
- **C** inverse trig ratio
- **D** area formula

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16 A ladder leans with opposite height 12 and hypotenuse 20. The sine of the angle with the ground as a decimal is

Question 16

A ladder leans with opposite height 12 and hypotenuse 20. The sine of the angle with the ground as a decimal is

ANSWER _____

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17

A ramp rises 9 over a horizontal run 12. The tangent of its angle as a decimal is

Question 17

A ramp rises 9 over a horizontal run 12. The tangent of its angle as a decimal is

ANSWER

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18

A right triangle has hypotenuse 25 and opposite side 7. The sine as a decimal is

Question 18

A right triangle has hypotenuse 25 and opposite side 7. The sine as a decimal is

ANSWER

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19

A right triangle has hypotenuse 25 and adjacent side 24. The cosine as a decimal is

Question 19

A right triangle has hypotenuse 25 and adjacent side 24. The cosine as a decimal is

ANSWER

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20 A flagpole shadow problem uses tangent when the known sides are opposite and

Question 20

A flagpole shadow problem uses tangent when the known sides are opposite and

A) hypotenuse only

B) vertical only

C) diagonal only

D) adjacent

A hypotenuse only

B vertical only

C diagonal only

D adjacent

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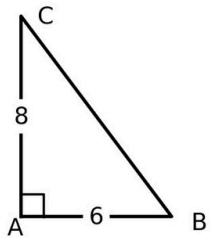
21

The diagram shows a right triangle with legs 6 and 8. Its hypotenuse is



Question 21

The diagram shows a right triangle with legs 6 and 8. Its hypotenuse is

ANSWER

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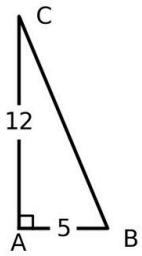
22

The diagram shows a right triangle with legs 5 and 12. Its hypotenuse is



Question 22

The diagram shows a right triangle with legs 5 and 12. Its hypotenuse is

ANSWER

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23 Sine cosine and tangent are called

Question 23

Sine cosine and tangent are called

A) trigonometric ratios

B) polynomial terms

C) geometric means

D) prime factors

A trigonometric ratios

B polynomial terms

C geometric means

D prime factors

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24 The hypotenuse in a right triangle is the side

Question 24

The hypotenuse in a right triangle is the side

A) next to the right angle only

B) opposite the right angle

C) shortest side

D) vertical side only

A next to the right angle only

B opposite the right angle

C shortest side

D vertical side only

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25

The sine of 60 degrees is approximately

Question 25

The sine of 60 degrees is approximately

A) 0.5

B) 1

C) 0.866

D) 0.707

A 0.5

B 1

C 0.866

D 0.707

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ANSWER KEY

1. A
2. B
3. C
4. 0.6
5. 0.8
6. 0.75
7. 2.4
8. D
9. A
10. B
11. C
12. D
13. A
14. B
15. C
16. 0.6
17. 0.75
18. 0.28
19. 0.96
20. D
21. 10
22. 13
23. A
24. B
25. C

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