ARKANSAS GEOMETRY · UNIT 3 · 25 QUESTIONS

Trigonometry and Measurement — 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 **The right triangle shown has two sides labelled. The sine of angle A is**

- **A** $\frac{7}{25}$
- **B** $\frac{24}{25}$
- **C** $\frac{7}{24}$
- **D** $\frac{25}{7}$

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2 In a right triangle, the side adjacent to an acute angle is 12 and the hypotenuse is 20. The cosine of the angle is

- **A** $\frac{16}{20}$
- **B** $\frac{12}{20}$
- **C** $\frac{12}{16}$
- **D** $\frac{20}{12}$

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3 In a right triangle, the side opposite an acute angle is 20 and the adjacent side is 21. The tangent of the angle is

- **A** $\frac{21}{20}$
- **B** $\frac{29}{20}$
- **C** $\frac{20}{21}$
- **D** $\frac{20}{29}$

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4 **In a right triangle, an angle measures 45° and one leg is 9. The hypotenuse is**

- **A** 9
- **B** 18
- **C** $9/\sqrt{2}$
- **D** $9\sqrt{2}$

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5 **In a 30 60 90 triangle, the shortest side is 8. The hypotenuse is**

- **A** 16
- **B** $8\sqrt{3}$
- **C** 4
- **D** 24

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6 **In a 30 60 90 triangle, the shortest side is 5. The longer leg is**

- **A** 10
- **B** $5\sqrt{3}$
- **C** $5\sqrt{2}$
- **D** $\frac{5}{2}$

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7 **A right triangle has one side 9 and the other side 12. Its hypotenuse is**

- **A** 21
- **B** 18
- **C** 10.5
- **D** 15

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8 **A right triangle has hypotenuse 26 and one leg 10. The other leg is**

- A 36
- B 16
- C 24
- D 28

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9 **A ladder 13 feet long leans against a wall with its foot 5 feet from the wall It reaches a height, in feet, of**



A 18

B 8

C 12

D 14

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10 The sine of 30° is

- A $\sqrt{3}/2$
- B $\frac{1}{2}$
- C 1
- D $\sqrt{2}/2$

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11 The tangent of 45° is

- A 0
- B $\sqrt{3}$
- C 1
- D $\frac{1}{2}$

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12 **For an acute angle A, sin A = 0.6 and cos A = 0.8. The value of tan A is**

A 1.4

B 0.48

C 0.75

D 1.33

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13 **The area of a triangle with base 16 and height 7 is**



A 112

B 56

C 23

D 46

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14 **The area of a parallelogram with base 15 and height 8 is**

A 120

B 46

C 60

D 23

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15 **The area of a trapezoid with bases 10 and 18 and height 6 is**

A 168

B 108

C 42

D 84

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16 **A rectangle has area 96 and length 12. Its width is**

- A 8
- B 108
- C 12
- D 84

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17 **A cylinder has radius 3 and height 10. Its volume, in terms of π, is**



A 30π

B 90π

C 60π

D 300π

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18 **A cone has radius 6 and height 8. Its volume, in terms of π, is**

A 48π

B 144π

C 288π

D 96π

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19 **A sphere has radius 3. Its volume, in terms of π, is**



A 36π

B 12π

C 27π

D 108π

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20 A rectangular prism has length 5, width 4, and height 9. Its volume is

- A 180
- B 90
- C 72
- D 36

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21 A rectangular prism has length 6, width 3, and height 4. Its surface area is

- A 72
- B 54
- C 36
- D 108

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22 **A right triangle has hypotenuse 15 and one leg 9. The other leg is**

- A 24
- B 6
- C 12
- D 18

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23 **An angle of elevation problem: from a point 40 meters from a tower, the angle of elevation to the top is 45°. The height of the tower, in meters, is _____**



ANSWER _____

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24 **A triangle has sides 7, 24, and 25. It is**

- **A** Obtuse
- **B** Acute
- **C** Right
- **D** Equilateral

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25 **The cosine of 60° is**

- **A** $\sqrt{3}/2$
- **B** $\frac{1}{2}$
- **C** $\sqrt{2}/2$
- **D** 1

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ANSWER KEY

1. A
2. B
3. C
4. D
5. A
6. B
7. D
8. C
9. C
10. B
11. C
12. C
13. B
14. A
15. D
16. A
17. B
18. D
19. A
20. A
21. D
22. C
23. 40
24. C
25. B

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