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

Understand It with Pulse | Flag a mistake

2 In a right triangle, the side adjacent to an acute angle is 9 and the hypotenuse is 15. The cosine of the angle is

- **A** $\frac{12}{15}$
- **B** $\frac{9}{15}$
- **C** $\frac{9}{12}$
- **D** $\frac{15}{9}$

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3 In a right triangle, the side opposite an acute angle is 15 and the adjacent side is 8. The tangent of the angle is

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

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4 **In a right triangle, an angle measures 30° and the opposite side is 8. The hypotenuse is**

- A 8
- B 16
- C 13.9
- D 4

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5 **In a right triangle, an angle measures 60° and the hypotenuse is 14. The adjacent side is**

- A 12.1
- B 28
- C 7
- D 14

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6 **In a right triangle, an angle measures 45° and the hypotenuse is 12. The opposite side, to one decimal place, is about**

- A 6
- B 12
- C 17.0
- D 8.5

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7 **In a right triangle, the side opposite an angle is 7 and the hypotenuse is 14. The angle measures**

- A 45°
- B 30°
- C 90°
- D 60°

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8 **In a right triangle, the side opposite an angle is 15 and the adjacent side is 8. The angle, to one decimal place, is about**

A 61.9°

B 28.1°

C 53.1°

D 36.9°

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9 **A tree is 30 m from an observer. The angle of elevation to the top is 30°. The height of the tree, to one decimal place, in metres, is about**



A 17.3

B 51.9

C 15

D 30

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10 From a point 40 m from the base of a tower, the angle of elevation to the top is 45°. The height of the tower, in metres, is



A 20

B 40

C 56.6

D 80

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11 In a triangle, angle A measures 45°, side a = 10, and angle B measures 90°. Side b, to one decimal place, is about

- A 10
- B 20
- C 14.1
- D 7.1

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12 In a triangle, two sides measure 6 and 8 with included angle 60°. The third side, to one decimal place, is about

- A 14
- B 10
- C 5
- D 7.2

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13 **In a triangle, the sides measure 7, 8, and 9. The angle opposite the side of length 9, to one decimal place, is about**

- A 73.4°
- B 54.2°
- C 90°
- D 60°

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14 **A triangle has two sides of lengths 10 and 12 with included angle 30°. Its area is**

- A 60
- B 30
- C 120
- D 15

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15 **A triangle has base 14 and height 9. Its area is**

A 126

B 23

C 63

D 31.5

Understand It with Pulse | Flag a mistake

16 **A rectangular prism measures 2 by 5 by 6. Its surface area is**



A 60

B 104

C 208

D 52

Understand It with Pulse | Flag a mistake

17 **A rectangular prism measures 2 by 5 by 6. Its volume is**

- A 104
- B 208
- C 120
- D 60

Understand It with Pulse | Flag a mistake

18 **A cylinder has radius 4 and height 6. Its volume, to one decimal place, is about**



A 301.6

B 150.8

C 452.4

D 75.4

Understand It with Pulse | Flag a mistake

19 **A cone has radius 3 and height 10. Its volume, to one decimal place, is about**

- A 282.7
- B 94.2
- C 31.4
- D 188.5

Understand It with Pulse | Flag a mistake

20 **A sphere has radius 5. Its volume, to one decimal place, is about**

- A 523.6
- B 314.2
- C 104.7
- D 209.4

Understand It with Pulse | Flag a mistake

21 **A cube has side length 4. Its surface area is**

A 64

B 96

C 16

D 24

Understand It with Pulse | Flag a mistake

22 **A right triangle has hypotenuse 25 and one leg 7. The other leg is _____**

ANSWER

Understand It with Pulse | Flag a mistake

23 **A ladder 10 m long leans against a wall at 60° to the ground. Its height up the wall, to one decimal place, in metres, is about ____**



ANSWER _____

Understand It with Pulse | Flag a mistake

24 **A cylinder has radius 3 and height 7. Its volume, to one decimal place, is about ____**

ANSWER _____

Understand It with Pulse | Flag a mistake

25 **From a point 25 m from the base of a tower, the angle of elevation to the top is 60°. The height of the tower, to one decimal place, in metres, is about _____**

ANSWER

Understand It with Pulse | Flag a mistake

ANSWER KEY

1.	A	**10.**	B	**19.**	B
2.	B	**11.**	C	**20.**	A
3.	C	**12.**	D	**21.**	B
4.	B	**13.**	A	**22.**	24
5.	C	**14.**	B	**23.**	8.7
6.	D	**15.**	C	**24.**	197.9
7.	B	**16.**	B	**25.**	43.3
8.	A	**17.**	D		
9.	A	**18.**	A		

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