CALIFORNIA GEOMETRY · FINAL EXAM · 50 QUESTIONS

Final Exam — 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 **Two triangles have two pairs of corresponding sides equal and the included angle equal. The criterion is**

- A SSA
- B ASA
- C SAS
- D SSS

Understand It with Pulse | Flag a mistake

2 **One triangle has sides 4, 6, and 8. Another has sides 10, 15, and 20. The triangles are similar by**

- A Not similar
- B SSS
- C AA
- D SAS

Understand It with Pulse | Flag a mistake

3 **A circle has radius 6. Its area is**

A 18π

B 12π

C 36π

D 72π

Understand It with Pulse | Flag a mistake

4 **A triangle has base 16 and height 7. Its area is**

A 56

B 112

C 23

D 46

Understand It with Pulse | Flag a mistake

5 **Two triangles have two pairs of corresponding angles equal and the included side equal. The criterion is**

- A HL
- B ASA
- C AAS
- D SSS

Understand It with Pulse | Flag a mistake

6 **Two similar figures have linear scale factor 1:3. The smaller figure has area 20. The larger area is**

- A 180
- B 60
- C 40
- D 120

Understand It with Pulse | Flag a mistake

7 **A sector has radius 4 and central angle 90°. Its area is**

- A 8π
- B 4π
- C 2π
- D 16π

Understand It with Pulse | Flag a mistake

8 **A rectangular prism has dimensions 3, 4, and 5. Its volume is**

- A 60
- B 47
- C 94
- D 30

Understand It with Pulse | Flag a mistake

9 **Two right triangles have equal hypotenuses and one pair of equal legs. The criterion is**

- **A** SAS
- **B** HL
- **C** ASA
- **D** SSS

Understand It with Pulse | Flag a mistake

10 **A right triangle has legs 9 and 12. The hypotenuse is**

- **A** 10
- **B** 21
- **C** 15
- **D** 18

Understand It with Pulse | Flag a mistake

11 **Two tangent segments from the same exterior point to a circle are**

- A Supplementary
- B Parallel
- C Perpendicular
- D Congruent

Understand It with Pulse | Flag a mistake

12 **A sphere has radius 3. Its volume is**

- A 108π
- B 27π
- C 12π
- D 36π

Understand It with Pulse | Flag a mistake

13 **Two triangles have three pairs of corresponding sides equal. The criterion is**

- **A** AAS
- **B** ASA
- **C** SSS
- **D** SAS

Understand It with Pulse | Flag a mistake

14 **In a right triangle the side opposite an acute angle is 8 and the hypotenuse is 17. The sine of the angle is**

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

Understand It with Pulse | Flag a mistake

15 The midpoint of (2, 4) and (8, 10) is

- A (5, 7)
- B (5, 3)
- C (3, 3)
- D (10, 14)

Understand It with Pulse | Flag a mistake

16 A cylinder has radius 2 and height 7. Its lateral area is

- A 56π
- B 14π
- C 28π
- D 4π

Understand It with Pulse | Flag a mistake

17 **Which transformation is NOT a rigid motion?**

- A Translation
- B Dilation with scale factor 2
- C Rotation
- D Reflection

Understand It with Pulse | Flag a mistake

18 **In a 45 45 90 triangle a leg is 6. The hypotenuse is**

- A 12
- B $6\sqrt{3}$
- C 6
- D $6\sqrt{2}$

Understand It with Pulse | Flag a mistake

19 **The circle $(x - 3)^2 + (y + 2)^2 = 25$ has center**

A (-3, -2)

B (3, -2)

C (3, 2)

D (-3, 2)

Understand It with Pulse | Flag a mistake

20 **Density equals mass divided by volume. A block has mass 240 and volume 80. Its density is**

A 3

B 160

C 320

D 0

Understand It with Pulse | Flag a mistake

21 **A triangle has two sides of lengths 6 and 14. The greatest possible whole number length of the third side is**

- A 21
- B 8
- C 20
- D 19

Understand It with Pulse | Flag a mistake

22 **If sin x = cos x and x is acute, then x is**

- A 90°
- B 60°
- C 30°
- D 45°

Understand It with Pulse | Flag a mistake

23 **The equation of a line with slope 2 through (0, -5) is**

- **A** $y = 2x + 5$
- **B** $y = -5x + 2$
- **C** $y = 2x - 5$
- **D** $y = \frac{1}{2}x - 5$

Understand It with Pulse | Flag a mistake

24 **Rotating a rectangle about one side generates a**

- **A** Cone
- **B** Cube
- **C** Sphere
- **D** Cylinder

Understand It with Pulse | Flag a mistake

25 **The perpendicular bisector of a segment is the set of points**

- A On the segment only
- B At the midpoint only
- C Parallel to the segment
- D Equidistant from the segment endpoints

Understand It with Pulse | Flag a mistake

26 **The geometric mean of 4 and 9 is**

- A 36
- B 13
- C 4
- D 6

Understand It with Pulse | Flag a mistake

27 **Opposite angles of a quadrilateral inscribed in a circle are**

A Supplementary

B Complementary

C Right always

D Congruent

Understand It with Pulse | Flag a mistake

28 **The area of a circle with radius 10 is**

A 10π

B 100π

C 200π

D 20π

Understand It with Pulse | Flag a mistake

29 **Triangle ABC is congruent to triangle XYZ. Side AB has length 9. The corresponding side is**

- A YZ
- B XY
- C XZ
- D BC

Understand It with Pulse | Flag a mistake

30 **A right triangle has legs 20 and 21. The hypotenuse is ____**

ANSWER _____

Understand It with Pulse | Flag a mistake

31 **A circle has radius 8. Its area is**

A 64π

B 128π

C 16π

D 32π

Understand It with Pulse | Flag a mistake

32 **A square has perimeter 36. Its area is**

A 36

B 144

C 81

D 18

Understand It with Pulse | Flag a mistake

33 The point (5, -3) reflected across the y -axis maps to

- A (-5, 3)
- B (5, 3)
- C (-5, -3)
- D (5, -3)

Understand It with Pulse | Flag a mistake

34 A right triangle has hypotenuse 25 and one leg 15. The other leg is

- A 10
- B 40
- C 20
- D 30

Understand It with Pulse | Flag a mistake

35 **An inscribed angle intercepting an arc of 110° measures**

A 55°

B 110°

C 220°

D 35°

Understand It with Pulse | Flag a mistake

36 **A cone has radius 3 and height 4. Its volume is**

A 12π

B 9π

C 48π

D 36π

Understand It with Pulse | Flag a mistake

37 The point (6, 1) rotated 90° clockwise about the origin maps to

- A (-1, -6)
- B (-1, 6)
- C (1, 6)
- D (1, -6)

Understand It with Pulse | Flag a mistake

38 If $\cos x = \frac{1}{2}$ and x is acute, then x is

- A 90°
- B 30°
- C 60°
- D 45°

Understand It with Pulse | Flag a mistake

39 **The slope of a horizontal line is**

- A 0
- B 1
- C -1
- D Undefined

Understand It with Pulse | Flag a mistake

40 **Two similar solids have linear scale factor 3:1. The larger has volume 270. The smaller volume is**

- A 30
- B 90
- C 810
- D 10

Understand It with Pulse | Flag a mistake

41 **A square has how many lines of symmetry**

ANSWER _____

Understand It with Pulse | Flag a mistake

42 **A shadow 12 long is cast by a pole 9 tall. A tree casts a shadow 20 long. The tree height is**

A 24

B 15

C 27

D 11

Understand It with Pulse | Flag a mistake

43 **A diameter has endpoints (0, 2) and (6, 10). The center is**

- A (3, 4)
- B (6, 8)
- C (3, 6)
- D (0, 6)

Understand It with Pulse | Flag a mistake

44 **A cross section of a sphere is always a**

- A Triangle
- B Rectangle
- C Square
- D Circle

Understand It with Pulse | Flag a mistake

45 **Two angles are complementary if their measures sum to**

- A 180°
- B 45°
- C 90°
- D 360°

Understand It with Pulse | Flag a mistake

46 **The sides 5, 6, 7 form a triangle that is**

- A Acute
- B Obtuse
- C Impossible
- D Right

Understand It with Pulse | Flag a mistake

47 **A circle has circumference 20π. Its radius is _____**

ANSWER _____

Understand It with Pulse | Flag a mistake

48 **A rectangle has length 12 and width 5. Its perimeter is _____**

ANSWER _____

Understand It with Pulse | Flag a mistake

49 **The angle bisector of an angle divides it into**

A Two congruent angles

B Two right angles

C Two segments

D Two supplementary angles

Understand It with Pulse | Flag a mistake

50 **Two similar triangles have shortest sides 4 and 16. The longest side of the smaller is 9. The longest side of the larger is ____**

ANSWER

Understand It with Pulse | Flag a mistake

ANSWER KEY

1. C
2. B
3. C
4. A
5. B
6. A
7. B
8. A
9. B
10. C
11. D
12. D
13. C
14. D
15. A
16. C
17. B
18. D
19. B
20. A
21. D
22. D
23. C
24. D
25. D
26. D
27. A
28. B
29. B
30. 29
31. A
32. C
33. B
34. C
35. A
36. A
37. D
38. C
39. A
40. D
41. 4
42. B
43. C
44. D
45. C
46. A
47. 10
48. 34
49. A
50. 36

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