CONNECTICUT 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 **Triangle ABC is congruent to triangle DEF. Angle A measures 55 degrees and angle B measures 65 degrees. Angle C measures**

- A 70°
- B 50°
- C 60°
- D 120°

Understand It with Pulse | Flag a mistake

2 **A circle has radius 5. Its circumference is**

- A 5π
- B 10π
- C 17π
- D 25π

Understand It with Pulse | Flag a mistake

3 **A right triangle has legs 6 and 8. Its hypotenuse is**

- A 11
- B 10
- C 9
- D 14

Understand It with Pulse | Flag a mistake

4 **The mean of the data set 5, 5, 9, 11, 15 is**

ANSWER _____

Understand It with Pulse | Flag a mistake

5 **Triangle ABC is congruent to triangle DEF. Angle A measures 30 degrees and angle B measures 110 degrees. Angle C measures**

- A 40°
- B 50°
- C 30°
- D 140°

Understand It with Pulse | Flag a mistake

6 **A circle has radius 10. Its circumference is**

- A 20π
- B 10π
- C 27π
- D 100π

Understand It with Pulse | Flag a mistake

7 A right triangle has hypotenuse 5 and one leg 3. The other leg is

- **A** 5
- **B** 4
- **C** 6
- **D** 7

Understand It with Pulse | Flag a mistake

8 The median of the data set 4, 6, 8, 10, 12 is

ANSWER _____

Understand It with Pulse | Flag a mistake

9 **A side of length 3 in one figure maps to a side of length 12 under a dilation. The scale factor is**

- A 5
- B 12
- C 1
- D 4

Understand It with Pulse | Flag a mistake

10 **A circle has radius 5. Its area is**

- A 10π
- B 29π
- C 50π
- D 25π

Understand It with Pulse | Flag a mistake

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

- **A** 12
- **B** 13
- **C** 14
- **D** 21

Understand It with Pulse | Flag a mistake

12 **The median of the data set 3, 6, 9, 12, 20 is**

ANSWER _____

Understand It with Pulse | Flag a mistake

13 **Two similar triangles have a linear scale factor of 1 to 3. The smaller triangle has perimeter 20. The larger perimeter is**

- A 20
- B 70
- C 60
- D 18

Understand It with Pulse | Flag a mistake

14 **A circle has radius 8. An arc with central angle 90 degrees has length**

- A 9π
- B 16π
- C 4π
- D 11π

Understand It with Pulse | Flag a mistake

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

- **A** $\frac{8}{10}$
- **B** $\frac{6}{8}$
- **C** $\frac{10}{6}$
- **D** $\frac{6}{10}$

Understand It with Pulse | Flag a mistake

16 The range of the data set 5, 5, 9, 11, 15 is

ANSWER _____

Understand It with Pulse | Flag a mistake

17 **Two similar triangles have a linear scale factor of 1 to 2. The smaller triangle has perimeter 30. The larger perimeter is**

A 30

B 60

C 70

D 15

Understand It with Pulse | Flag a mistake

18 **A circle has radius 18. An arc with central angle 60 degrees has length**

A 19π

B 6π

C 36π

D 21π

Understand It with Pulse | Flag a mistake

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

Understand It with Pulse | Flag a mistake

20 A bag has 3 red marbles and 7 blue marbles. The probability of drawing a red marble is

- **A** $\frac{7}{10}$
- **B** $\frac{3}{7}$
- **C** $\frac{1}{3}$
- **D** $\frac{3}{10}$

Understand It with Pulse | Flag a mistake

21 **Two similar figures have a linear scale factor of 1 to 3. The smaller figure has area 9. The larger area is**

- A 81
- B 27
- C 12
- D 86

Understand It with Pulse | Flag a mistake

22 **The distance between the points (1, 2) and (4, 6) is**

- A 5
- B 6
- C 7
- D 4

Understand It with Pulse | Flag a mistake

23 In a right triangle, the side adjacent to an acute angle is 12 and the hypotenuse is 15. The cosine of the angle is

A $\frac{9}{15}$

B $\frac{12}{9}$

C $\frac{12}{15}$

D $\frac{15}{12}$

Understand It with Pulse | Flag a mistake

24 A bag has 6 red marbles and 4 blue marbles. The probability of drawing a red marble is

A $\frac{4}{10}$

B $\frac{6}{4}$

C $\frac{6}{10}$

D $\frac{1}{3}$

Understand It with Pulse | Flag a mistake

25 **In a triangle, a midsegment is parallel to a base of length 14. The length of the midsegment is**

ANSWER _____

Understand It with Pulse | Flag a mistake

26 **The midpoint of the segment joining (2, 4) and (6, 8) is**

A (4, 6)

B (5, 6)

C (4, 7)

D (2, 4)

Understand It with Pulse | Flag a mistake

27 In a right triangle, the side opposite an acute angle is 6 and the adjacent side is 8. The tangent of the angle is

- **A** $\frac{8}{6}$
- **B** $\frac{6}{8}$
- **C** $\frac{6}{10}$
- **D** $\frac{8}{10}$

Understand It with Pulse | Flag a mistake

28 A bag has 4 red marbles and 6 blue marbles. The probability of NOT drawing a red marble is

- **A** $\frac{4}{10}$
- **B** $\frac{6}{10}$
- **C** $\frac{6}{4}$
- **D** $\frac{1}{3}$

Understand It with Pulse | Flag a mistake

29 **In a triangle, a midsegment is parallel to a base of length 18. The length of the midsegment is**

ANSWER _____

Understand It with Pulse | Flag a mistake

30 **The midpoint of the segment joining (3, 5) and (7, 9) is**

A (6, 7)

B (5, 8)

C (3, 5)

D (5, 7)

Understand It with Pulse | Flag a mistake

31 **A triangle has base 10 and height 6. Its area is**

- **A** 60
- **B** 16
- **C** 30
- **D** 15

Understand It with Pulse | Flag a mistake

32 **A fair coin is tossed and a fair six sided die is rolled. The probability of heads and a 2 is**

- **A** $\frac{1}{6}$
- **B** $\frac{1}{12}$
- **C** $\frac{1}{2}$
- **D** $\frac{1}{3}$

Understand It with Pulse | Flag a mistake

33 **Under a dilation centered at the origin with scale factor 3, the point (1, 4) maps to**

A (1, 12)

B (3, 4)

C (3, 12)

D (4, 7)

Understand It with Pulse | Flag a mistake

34 **The slope of the line through (0, 0) and (3, 9) is**

A 4

B 2

C 3

D 5

Understand It with Pulse | Flag a mistake

35 **A triangle has base 6 and height 9. Its area is**

ANSWER _____

Understand It with Pulse | Flag a mistake

36 **A fair coin is tossed and a fair six sided die is rolled. The probability of heads and a 4 is**

A $\frac{1}{12}$

B $\frac{1}{6}$

C $\frac{1}{2}$

D $\frac{1}{3}$

Understand It with Pulse | Flag a mistake

37 **Under a dilation centered at the origin with scale factor 3, the point (4, -1) maps to**

A (4, -3)

B (12, -3)

C (12, -1)

D (7, 2)

Understand It with Pulse | Flag a mistake

38 **The slope of the line through (1, 1) and (5, 9) is**

A 3

B 2

C 1

D 4

Understand It with Pulse | Flag a mistake

39 **A rectangular box has length 2, width 5, and height 6. Its volume is**

ANSWER _____

Understand It with Pulse | Flag a mistake

40 **The mode of the data set 3, 5, 5, 7, 9 is**

A 6

B 7

C 9

D 5

Understand It with Pulse | Flag a mistake

41 **A triangle has two sides of lengths 6 and 8. The greatest possible whole number length of the third side is**

- A 13
- B 14
- C 12
- D 2

Understand It with Pulse | Flag a mistake

42 **A circle has equation $(x + 1)^2 + (y - 2)^2 = 9$. Its center is**

- A (-1, 2)
- B (1, 2)
- C (-1, -2)
- D (0, 0)

Understand It with Pulse | Flag a mistake

43 **A cylinder has radius 3 and height 5. Its volume is**

- A 15π
- B 80π
- C 54π
- D 45π

Understand It with Pulse | Flag a mistake

44 **20 percent of 10 is**

ANSWER _____

Understand It with Pulse | Flag a mistake

45 **Two triangles have all three pairs of corresponding sides equal. The congruence criterion that applies is**

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

Understand It with Pulse | Flag a mistake

46 **A circle is centered at (3 , 1) with radius 4 . The r^2 is**

ANSWER _____

Understand It with Pulse | Flag a mistake

47 **A cylinder has radius 5 and height 2. Its volume is**

- A 10π
- B 72π
- C 50π
- D 75π

Understand It with Pulse | Flag a mistake

48 **60 percent of 30 is**

ANSWER _____

Understand It with Pulse | Flag a mistake

49 **Two right triangles have equal hypotenuses and one pair of equal legs. The congruence criterion that applies is**

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

Understand It with Pulse | Flag a mistake

50 **A circle is centered at (-2 , -1) with radius 6 . The r^2 is**

ANSWER _____

Understand It with Pulse | Flag a mistake

ANSWER KEY

1. C
2. B
3. B
4. 9
5. A
6. A
7. B
8. 8
9. D
10. D
11. A
12. 9
13. C
14. C
15. D
16. 10
17. B
18. B
19. D
20. D
21. A
22. A
23. C
24. C
25. 7
26. A
27. B
28. B
29. 9
30. D
31. C
32. B
33. C
34. C
35. 27
36. A
37. B
38. B
39. 60
40. D
41. A
42. A
43. D
44. 2
45. D
46. 16
47. C
48. 18
49. C
50. 36

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