ARKANSAS 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 angles equal. They are congruent by**

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

Understand It with Pulse | Flag a mistake

2 **The midpoint of the segment joining (2, 4) and (10, 6) is**

- A (8, 2)
- B (6, 10)
- C (6, 5)
- D (12, 10)

Understand It with Pulse | Flag a mistake

3 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** $\frac{20}{12}$

Understand It with Pulse | Flag a mistake

4 The data set is 3, 8, 11, 14, 19, 23. The median is

- **A** 11
- **B** 12.5
- **C** 14
- **D** 13

Understand It with Pulse | Flag a mistake

5 **Triangle DEF is congruent to triangle GHI Angle D measures 42°. Angle G measures**

- **A** 138°
- **B** 48°
- **C** 42°
- **D** 84°

Understand It with Pulse | Flag a mistake

6 **A line has slope 3. A line perpendicular to it has slope**

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

Understand It with Pulse | Flag a mistake

7 **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 $\frac{5}{2}$

Understand It with Pulse | Flag a mistake

8 **A fair six sided die is rolled The probability of rolling a number greater than 4 is**

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

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9 **A triangle has two sides of lengths 6 and 11. Which length could be the third side?**

- A 5
- B 18
- C 16
- D 17

Understand It with Pulse | Flag a mistake

10 **The circle $(x - 1)^2 + (y + 4)^2 = 36$ has center**

- A (1, -4)
- B (-1, 4)
- C (1, 4)
- D (-1, -4)

Understand It with Pulse | Flag a mistake

11 **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

Understand It with Pulse | Flag a mistake

12 **Events A and B are independent The probability of A is 0.5 and the probability of B is 0.4. The probability of both A and B is**

- A 0.9
- B 0.1
- C 0.5
- D 0.2

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13 **A triangle has two sides of lengths 8 and 13. The greatest possible whole number length of the third side is**

- A 21
- B 5
- C 20
- D 22

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14 **A circle has radius 6. Its area, in terms of π, is**

- A 12π
- B 6π
- C 36π
- D 72π

Understand It with Pulse | Flag a mistake

15 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

Understand It with Pulse | Flag a mistake

16 Two fair dice are rolled The probability the sum is 7 is

- A $\frac{1}{6}$
- B $\frac{5}{36}$
- C $\frac{7}{36}$
- D $\frac{1}{12}$

Understand It with Pulse | Flag a mistake

17 **Under a reflection across the x axis, the point (3, -5) maps to**

A (-3, -5)

B (-3, 5)

C (3, 5)

D (5, 3)

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18 **An inscribed angle intercepts an arc of 100°. The angle measures**

A 100°

B 200°

C 25°

D 50°

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

A 8

B 108

C 12

D 84

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20 **A password uses 2 different letters followed by 2 different digits Counting order, the number of choices for the first two letters is**

A 26

B 650

C 676

D 52

Understand It with Pulse | Flag a mistake

21 In triangle ABC, AB = 7, BC = 9, and CA = 11 The largest angle is opposite the side of length

- A 7
- B 9
- C 20
- D 11

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22 Two chords intersect inside a circle One chord is cut into segments 6 and 8. The other chord is cut into segments 4 and x. The value of x is

- A 12
- B 10
- C 14
- D 24

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

- A 36π
- B 12π
- C 27π
- D 108π

Understand It with Pulse | Flag a mistake

24 Out of 200 students, 80 play soccer and 50 play basketball If 30 play both, the number who play neither is

- A 100
- B 130
- C 70
- D 30

Understand It with Pulse | Flag a mistake

25 The sum of the interior angles of a hexagon is

- A 540°
- B 720°
- C 360°
- D 900°

Understand It with Pulse | Flag a mistake

26 A regular hexagon is inscribed in a circle of radius 10. Each side of the hexagon has length

- A 5
- B 20
- C $10\sqrt{3}$
- D 10

Understand It with Pulse | Flag a mistake

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

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

Understand It with Pulse | Flag a mistake

28 **A box plot shows a median of 30 and a maximum of 55. About half the data lie below**

- A 55
- B 30
- C 15
- D 42.5

Understand It with Pulse | Flag a mistake

29 **The diagonals of a rhombus have lengths 10 and 24. The side length of the rhombus is**

A 26

B 13

C 17

D 34

Understand It with Pulse | Flag a mistake

30 **The distance between (-3, 7) and (5, 1) is**

A 14

B 8

C 100

D 10

Understand It with Pulse | Flag a mistake

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

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

Understand It with Pulse | Flag a mistake

32 The data set is 6, 10, 14, 18, 22. The mean is

- **A** 14
- **B** 12
- **C** 18
- **D** 10

Understand It with Pulse | Flag a mistake

33 **In a right triangle, the hypotenuse and one leg are congruent to the hypotenuse and one leg of another right triangle They are congruent by**

- A HL
- B ASA
- C SSA
- D AAA

Understand It with Pulse | Flag a mistake

34 **The midpoint of the segment joining (-1, 8) and (5, 2) is**

- A (2, 5)
- B (3, 3)
- C (2, 3)
- D (4, 10)

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35 **In a 30 60 90 triangle, the hypotenuse is 14. The shortest side is**

- A 28
- B $14\sqrt{3}$
- C $7\sqrt{3}$
- D 7

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36 **The data set is 8, 15, 22, 29, 36. The range is**

- A 36
- B 44
- C 28
- D 8

Understand It with Pulse | Flag a mistake

37 Two similar triangles have areas 25 and 100. A side of the smaller triangle is 6. The corresponding side of the larger triangle is

- **A** 24
- **B** 18
- **C** 9
- **D** 12

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38 A circle has radius 9. Its circumference, in terms of π, is

- **A** 9π
- **B** 81π
- **C** 36π
- **D** 18π

Understand It with Pulse | Flag a mistake

39 The sine of 60° is

A $\frac{1}{2}$

B $\frac{\sqrt{3}}{2}$

C $\frac{\sqrt{2}}{2}$

D 1

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40 A bag has 5 red marbles and 15 blue marbles The probability of drawing a blue marble is

A $\frac{1}{4}$

B $\frac{3}{4}$

C $\frac{1}{3}$

D $\frac{5}{20}$

Understand It with Pulse | Flag a mistake

41 **Under a rotation of 180° about the origin, the point (5, -2) maps to**

- A (5, 2)
- B (-5, 2)
- C (-2, 5)
- D (2, -5)

Understand It with Pulse | Flag a mistake

42 **An inscribed angle measures 35°. Its intercepted arc measures**

- A 35°
- B 17.5°
- C 105°
- D 70°

Understand It with Pulse | Flag a mistake

43 A rectangular prism has length 8, width 5, and height 3. Its volume is

- A 120
- B 40
- C 16
- D 80

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44 In a data set, the first quartile is 15 and the third quartile is 38. The interquartile range is

- A 53
- B 23
- C 26.5
- D 15

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45 **In a parallelogram, opposite sides are**

A Perpendicular

B Congruent

C Unequal

D Parallel only

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46 **Two radii of a circle form a central angle of 120°. The minor arc between their endpoints measures**

A 60°

B 240°

C 120°

D 30°

Understand It with Pulse | Flag a mistake

47 **The area of a trapezoid with bases 8 and 14 and height 5 is ____**

ANSWER _____

Understand It with Pulse | Flag a mistake

48 **The mean of 5, 15, 25, 35 is ____**

ANSWER _____

Understand It with Pulse | Flag a mistake

49 **Two similar rectangles have perimeters 30 and 45. A side of the smaller rectangle is 8. The corresponding side, in the larger rectangle, is ____**

ANSWER _____

Understand It with Pulse | Flag a mistake

50 **The circle with center (-2, 6) and radius 3 has equation**

A $(x + 2)^2 + (y - 6)^2 = 9$

B $(x - 2)^2 + (y + 6)^2 = 9$

C $(x + 2)^2 + (y - 6)^2 = 3$

D $(x - 2)^2 + (y - 6)^2 = 9$

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ANSWER KEY

1.	D	**18.**	D	**35.**	D
2.	C	**19.**	A	**36.**	C
3.	B	**20.**	B	**37.**	D
4.	B	**21.**	D	**38.**	D
5.	C	**22.**	A	**39.**	B
6.	B	**23.**	A	**40.**	B
7.	B	**24.**	A	**41.**	B
8.	D	**25.**	B	**42.**	D
9.	C	**26.**	D	**43.**	A
10.	A	**27.**	C	**44.**	B
11.	C	**28.**	B	**45.**	B
12.	D	**29.**	B	**46.**	C
13.	C	**30.**	D	**47.**	55
14.	C	**31.**	A	**48.**	20
15.	C	**32.**	A	**49.**	12
16.	A	**33.**	A	**50.**	A
17.	C	**34.**	A		

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