ONTARIO PRINCIPLES OF MATHEMATICS, GRADE 10, ACADEMIC (MPM2D) · UNIT C · 25 QUESTIONS

Analytic Geometry — 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 For the segment joining (0, 0) and (3, 4), the length of the segment is

ANSWER _____

Understand It with Pulse | Flag a mistake

2 For the segment joining (0, 0) and (3, 6), the slope of the segment is

ANSWER _____

Understand It with Pulse | Flag a mistake

3 A circle is centred at (0, 0) and passes through (3, 4). Its radius is

ANSWER _____

Understand It with Pulse | Flag a mistake

4 **A line has slope 3 and passes through (2, 1). Its equation is**

- A y = -3x - 5
- B y = 3x - 3
- C y = 3x - 7
- D y = 3x - 5

Understand It with Pulse | Flag a mistake

5 **A triangle with vertices (0, 0), (4, 0) and (2, 3) is**

- A a right triangle
- B an isosceles triangle
- C an equilateral triangle
- D an obtuse triangle

Understand It with Pulse | Flag a mistake

6 **For the segment joining (0, 0) and (6, 0), the equation of its perpendicular bisector is**

- A x = 6
- B y = 3
- C x = 3
- D y = 6

Understand It with Pulse | Flag a mistake

7 **For the segment joining (2, 3) and (8, 5), the x-coordinate of the midpoint is**

ANSWER _____

Understand It with Pulse | Flag a mistake

8 **For the segment joining (3, 2) and (9, 8), the y-coordinate of the midpoint is**

ANSWER _____

Understand It with Pulse | Flag a mistake

9 The equation of the circle centred at (0, 0) with radius 5 is

- **A** $x^2 + y^2 = 25$
- **B** $x^2 + y^2 = 5$
- **C** $x^2 + y^2 = 10$
- **D** $x^2 + y^2 = 26$

Understand It with Pulse | Flag a mistake

10 A triangle has vertices (-2, 0), (4, 0) and (1, 5). The length of the median to the side joining (-2, 0) and (4, 0) is

ANSWER _____

Understand It with Pulse | Flag a mistake

11 **For the circle $x^2 + y^2 = 25$, the point (4, 4) is**

- **A** on the circle
- **B** inside the circle
- **C** outside the circle
- **D** at the centre

Understand It with Pulse | Flag a mistake

12 **For the circle $x^2 + y^2 = 49$, the radius is**

ANSWER _____

Understand It with Pulse | Flag a mistake

13 **For the segment joining (2, 1) and (6, 9), the midpoint is**

A (5, 5)

B (4, 6)

C (5, 4)

D (4, 5)

Understand It with Pulse | Flag a mistake

14 **Quadrilateral ABCD is shown on a coordinate grid. The most specific name for quadrilateral ABCD is**

A a square

B a rhombus

C a kite

D a rectangle

Understand It with Pulse | Flag a mistake

15 **For the segment joining (0, 0) and (5, 12), the length of the segment is**

ANSWER _____

Understand It with Pulse | Flag a mistake

16 **For the segment joining (1, 2) and (7, 5), the slope of the segment is**

ANSWER _____

Understand It with Pulse | Flag a mistake

17 **A circle is centred at (0, 0) and passes through (6, 8). Its radius is**

ANSWER _____

Understand It with Pulse | Flag a mistake

18 **A line has slope -2 and passes through (3, 4). Its equation is**

- A y = -2x + 10
- B y = 2x + 10
- C y = -2x + 12
- D y = -2x + 8

Understand It with Pulse | Flag a mistake

19 **A triangle with vertices (0, 0), (2, 0) and (1, 1) is**

- A a right scalene triangle
- B an isosceles triangle that is not right
- C a right isosceles triangle
- D an equilateral triangle

Understand It with Pulse | Flag a mistake

20 For the segment joining (0, 0) and (4, 4), the equation of its perpendicular bisector is

- A y = x + 4
- B y = -x
- C y = x
- D y = -x + 4

Understand It with Pulse | Flag a mistake

21 For the segment joining (1, 4) and (7, 2), the x-coordinate of the midpoint is

ANSWER _____

Understand It with Pulse | Flag a mistake

22 For the segment joining (-1, 5) and (5, 1), the y-coordinate of the midpoint is

ANSWER _____

Understand It with Pulse | Flag a mistake

23 The equation of the circle centred at (0, 0) with radius 7 is

- A $x^2 + y^2 = 7$
- B $x^2 + y^2 = 49$
- C $x^2 + y^2 = 14$
- D $x^2 + y^2 = 50$

Understand It with Pulse | Flag a mistake

24 For the segment joining (0, 0) and (1, 2), the length of the segment is

- A $\sqrt{4}$
- B $\sqrt{6}$
- C $\sqrt{8}$
- D $\sqrt{5}$

Understand It with Pulse | Flag a mistake

25 **For the segment joining (0, 5) and (2, 1), the slope of the segment is**

ANSWER

Understand It with Pulse | Flag a mistake

ANSWER KEY

1. 5
2. 2
3. 5
4. D
5. B
6. C
7. 5
8. 5
9. A
10. 5
11. C
12. 7
13. D
14. D
15. 13
16. 0.5
17. 10
18. A
19. C
20. D
21. 4
22. 3
23. B
24. D
25. -2

© 2026 Brett Robbins. All Rights Reserved.