Coordinate Geometry Quiz

1. The distance between the points (2, 3) and (5, 1) is:

A) ( sqrt{13} )

B) 3

C) ( 2sqrt{5} )

D) ( sqrt{10} )

2. The midpoint of the line segment joining the points (1, 2) and (3, 4) is:

A) (2, 3)

B) (1, 1)

C) (2, 2)

D) (4, 6)

3. The slope of the line passing through the points (1, 2) and (4, 6) is:

A) 4/3

B) 3/4

C) 1/3

D) 4

4. Which form is the equation ( y = 2x + 3 )?

A) Standard form

B) Slope-intercept form

C) Point-slope form

D) Two-point form

5. What are the coordinates of the y-intercept of the line ( 3x 4y = 12 )?

A) (0, -3)

B) (-4, 0)

C) (0, -4)

D) (3, 0)

6. The equation of the line that is parallel to the y-axis and passes through (5, -3) is:

A) ( x = 5 )

B) ( y = -3 )

C) ( x = -3 )

D) ( y = 5 )

7. The area of the triangle formed by the points (1, 1), (4, 1), and (1, 4) is:

A) 4.5 square units

B) 6 square units

C) 9 square units

D) 3 square units

8. If the points (1, 1), (5, k), and (4, 6) are collinear, then the value of k is:

A) 5

B) 4

C) 3

D) 2

9. What is the slope of the x-axis?

A) 0

B) 1

C) Undefined

D) Infinity

10. The point of intersection of the lines ( 2x + 3y = 6 ) and ( x y = 2 ) is:

A) (2, 0)

B) (0, 2)

C) (2, -2)

D) (0, -2)

11. The equation ( x^2 + y^2 = 25 ) represents a circle with radius:

A) 5 units

B) 25 units

C) ( sqrt{25} ) units

D) 10 units

12. If a line has a slope of -2, what is the slope of a line perpendicular to it?

A) 2

B) -2

C) 1/2

D) -1/2

13. What is the equation of a line that passes through the origin and has a slope of 1?

A) ( y = x )

B) ( y = 2x )

C) ( y = -x )

D) ( x = y )

14. Which of the following points lies on the line ( y = -3x + 4 )?

A) (0, 4)

B) (1, 1)

C) (2, -2)

D) (1, 7)

15. The coordinates of the point which divides the line segment joining the points (1, -3) and (-1, 4) in the ratio 2:3 internally are:

A) (1/5, 1/5)

B) (-1/5, 1/5)

C) (1/5, -1/5)

D) (-1/5, -1/5)

16. The distance of the point (3, 4) from the origin is:

A) 5 units

B)

7 units

C) 6 units

D) ( sqrt{7} ) units

17. The equation of the line perpendicular to the line ( 4x 3y = 12 ) and passing through the point (1, -3) is:

A) ( 3x + 4y = -9 )

B) ( 4x + 3y = -9 )

C) ( 3x 4y = -9 )

D) ( 3x + 4y = 9 )

18. If the points (a, 0), (0, b) and (1, 1) are collinear, then the relationship between a and b is:

A) ( ab = 1 )

B) ( a + b = 1 )

C) ( a b = 1 )

D) ( frac{1}{a} + frac{1}{b} = 1 )

19. The line represented by the equation ( y = mx + c ) will be horizontal if:

A) ( m = 0 )

B) ( c = 0 )

C) ( m = 1 )

D) ( c = 1 )

20. The coordinates of the centroid of a triangle with vertices at (0, 0), (6, 0), and (0, 8) are:

A) (2, 2)

B) (2, 8/3)

C) (6/3, 8/3)

D) (2, 2.666)

Here is the answer key for the Coordinate Geometry quiz:

1. D) ( sqrt{10} )

2. A) (2, 3)

3. B) 4/3

4. B) Slope-intercept form

5. C) (0, -3)

6. A) ( x = 5 )

7. B) 6 square units

8. B) 4

9. A) 0

10. A) (2, 0)

11. A) 5 units

12. C) 1/2

13. A) ( y = x )

14. A) (0, 4)

15. B) (-1/5, 1/5)

16. A) 5 units

17. A) ( 3x + 4y = -9 )

18. D) ( frac{1}{a} + frac{1}{b} = 1 )

19. A) ( m = 0 )

20. D) (2, 2.666)

When you're ready, we can move on to the next chapter's quiz or if you need anything else, just let me know!