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!