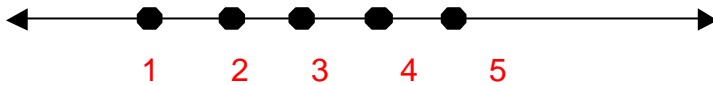


Final Examination
Math 208

Please include your name and date completed on your answer sheet.

1. The below line can represents what solution set. Select the BEST answer:

- a. All integers less than 5
- b. All real numbers greater than 0
- c. All counting numbers less than 6
- d. All irrational numbers between 1 and 5

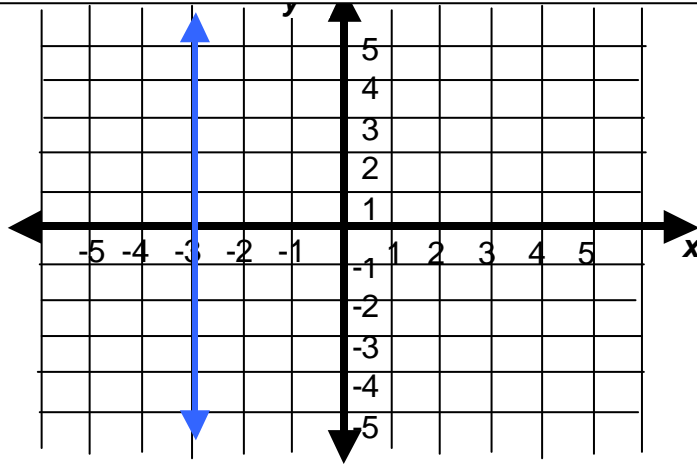


- 2. True or False: Every counting number is a whole number.
- 3. True or False: Some of the rational numbers are integers.
- 4. True or False. The absolute value of 12 is larger than the absolute value of -11.
- 5. Find the sum: $\frac{3}{4} + \frac{1}{6}$
- 6. Perform the indicated operations: $0.59 + (-3.4)$
- 7. Simplify the expression by combining like terms:
 $-3x + 12 + 5x - 9$
- 8. Evaluate: $-9w - 54 = 0$
- 9. Solve by eliminating decimal numbers: $0.4x - 1.6 = 0.6x$
- 10. Solve for x: $5x - 9 = x - 4$
- 11. Solve for x: $-2(x - b) - (5a - x) = a + b$
- 12. Consider the following nine integers: -4, -3, -2, -1, 0, 1, 2, 3, 4
Which of the integers has an absolute value greater than 1?
- 13. Henry sold his yacht on consignment for x dollars. The salesman's commission was 10% of the selling price and Henry received \$16,750. Write the algebraic equation.
- 14. Solve for x. $-6x + 3 = -7 - 5x$
- 15. Complete each ordered pair so that it satisfies the given equation.
 $y = 2x + 5$; (8,), (-1,), (, -1)
- 16. Solve the absolute equation: $4 - 3|x - 2| = -8$

Use the graph below to answer questions 17-18.

17. Find the slope of the below line

18. What is the equation of the below line.

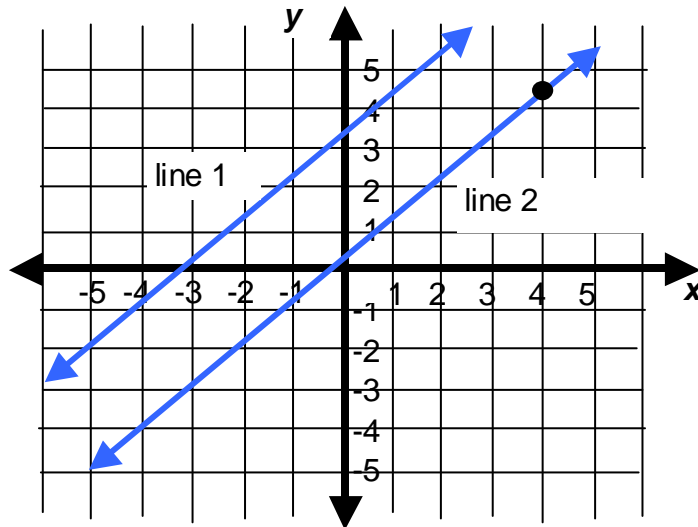


Use the graph below to answer questions 19-21.

19. What is the equation of line 1 below?

20. What is the equation of line 2 below?

21. What is the slope of line 2 below?



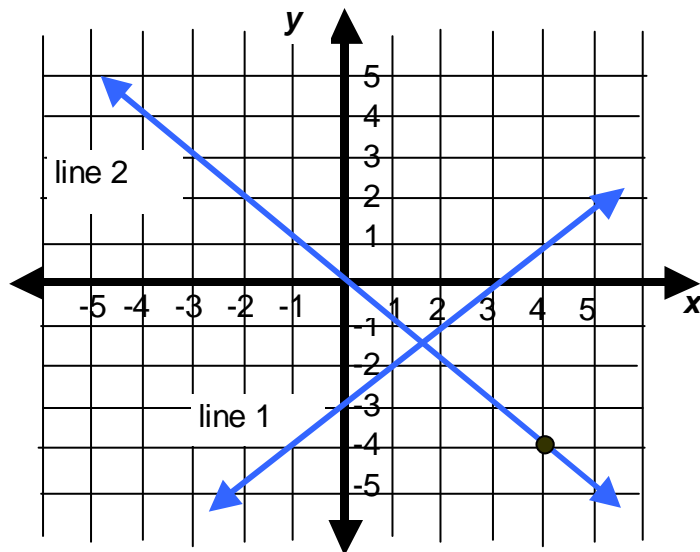
Use the graph below to answer questions 22-25.

22. What is the equation of line 1?

23. What is the equation of line 2?

24. What is the slope of line 2?

25. What is the slope of the line perpendicular to line 2 ?



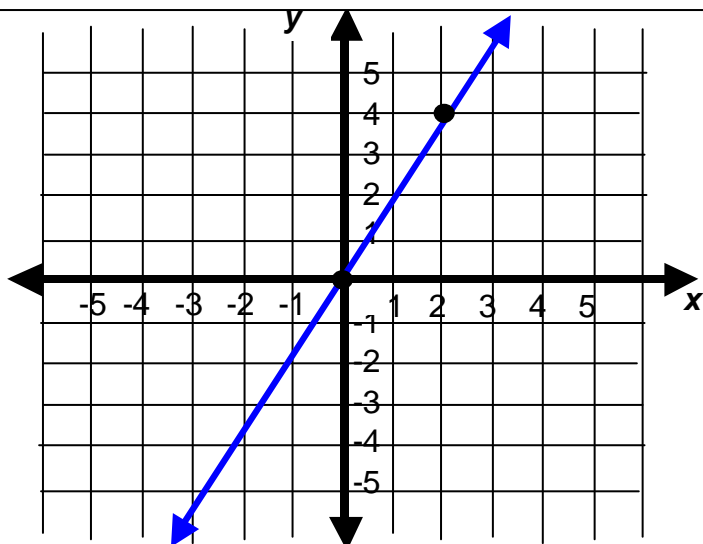
Use the graph below to answer questions 26 - 27.

26. Find the slope the line.

27. What is the:

a. x-intercept

b. y-intercept



28. Find the equation of the line through (1,4) with slope $1/4$.

29. Find the slope of the line that goes through (2, 5) (6, 10).

30. Find the slope and y-intercept for: $2x + 3y = 9$

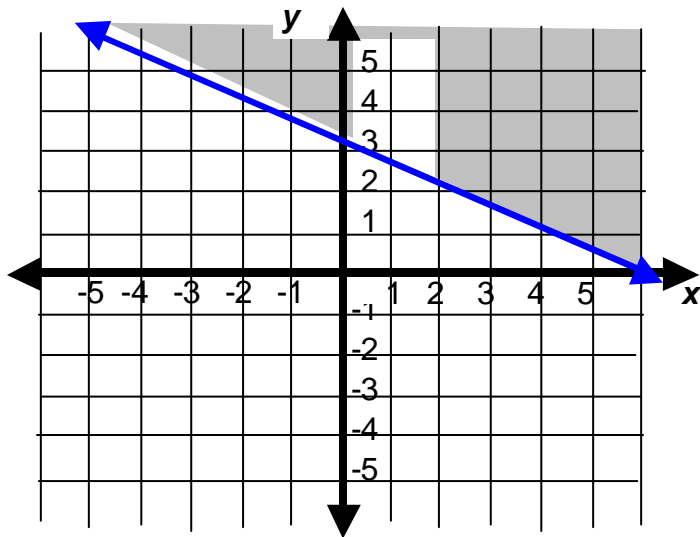
31. Write the below equation in standard form using only integers.
 $y = 4x/5 + 2/3$

32. Which of the points following the inequality satisfies the below inequality: $y \leq -x + 6$?
Points: (2, 0), (-3, 9), (-4, 12)

Use the below graph to answer questions 33-34.

33. Based on the graph below
a. What is the inequality represented by the graph?
b. What is the equation of the line?

34. What is the value of the y - intercept?



Use the below graph to answer questions 35 - 38

35. What is the inequality represented by line 1?

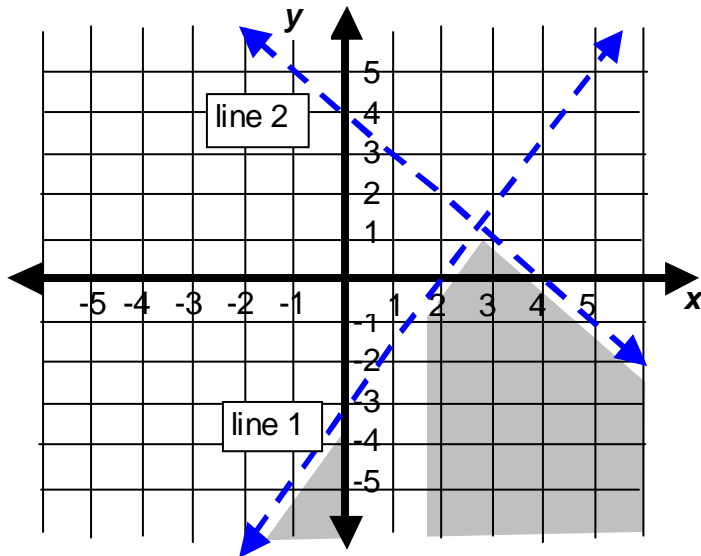
36. What is the inequality represented by line 2?

37. What are the following points for line 2 using coordinate pairs?

- a. y-intercept
- b. x-intercept

38. Which points are in the region defined by the system of inequalities?

- a. (3, -3)
- b. (-3, -3)
- c. (-3, 3)
- d. (3, 3)

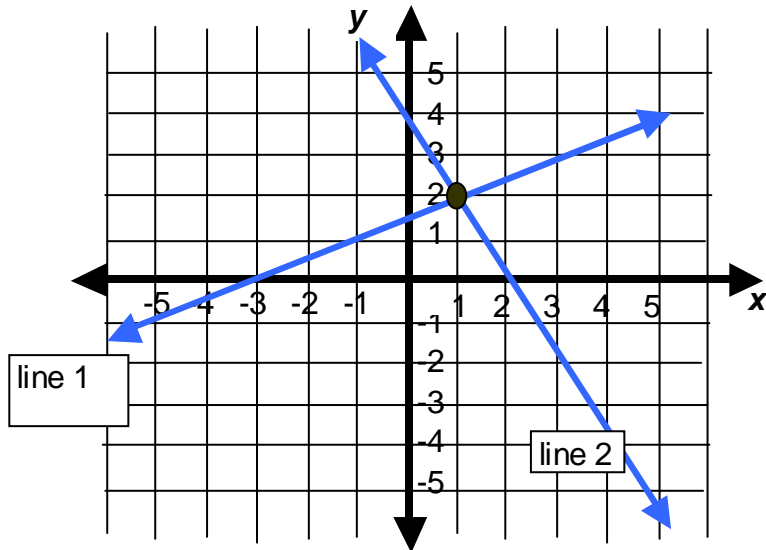


Use the graph below to answer questions 39-41.

39. What is the equation of line 1 in slope intercept form?

40. What is the equation of line 2 in slope intercept form?

41. Use the substitution method to determine the point of intersection of the two lines? Show your work for full credit.



42 Solve by the substitution method. Determine whether the equations are dependent, independent or inconsistent.

$$3x - 6y = 5$$

$$2y = 4x - 6$$

43. The length of a rectangular swimming pool is 30 feet longer than the width. If the perimeter is 164 feet, then what are the length and width? Write a system of two equations and solve by substitution.

44. Solve by using the addition method.

$$x - 2y = -1$$

$$-x + 5y = 4$$

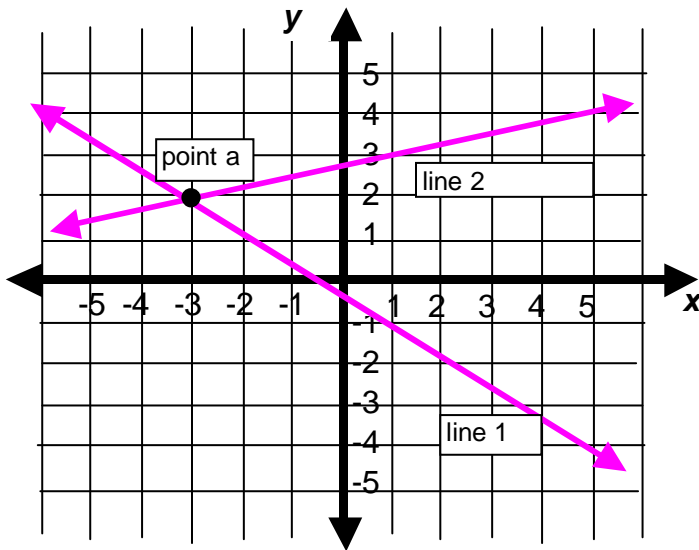
Use the graph below to answer questions 45-48.

45. What is the equation for line 1 in standard form?

46. What is the equation for line 2 in standard form?

47. What is the x intercept for line 2?

48. Use the substitution method to find the intersection point, a. Show work for full credit.



49. Solve by the substitution method. Determine whether the equations are dependent, independent or inconsistent.

$$y = 3x$$

$$y = 3x + 1$$

50. Solve by using the addition method. Determine whether the equations are independent, dependent or inconsistent.

$$5x - y = 1$$

$$10x - 2y = 2$$