

Study Guide - Chapter 2

Solve each equation.

1) $-(n + 10) = 3(n + 6)$

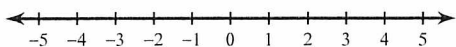
2) $19 - 10a = 10(6a - 7) - 7(1 + 10a)$

3) $7(-3x + 8) = -7 - 3(10x - 9)$

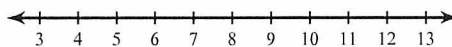
4) $2x + 4 - 5x = -3x + 4$

Solve each inequality and graph its solution.

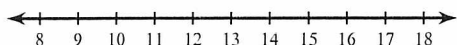
5) $11x + 40 \geq 11(x - 6)$



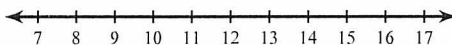
6) $5(12 - 2a) - 12(a - 9) \leq -9a + 11a$



7) $6(3r - 2) \leq 6 + 4(5r - 10)$



8) $-(1 + 3n) \geq -3n + 5$



Solve each proportion.

9) $-\frac{2}{5} = \frac{8}{x}$

10) $\frac{n-7}{n-10} = \frac{6}{8}$

Write the equation and solve.

11) Shanti has just joined a DVD rental club. She pays a monthly membership fee of \$4.95 and each DVD rental is \$1.95. If Shanti's budget for DVD rentals in a month is \$42, how many DVDs can Shanti rent in her first month if she doesn't want to go over her budget?

12) The tree in front of Luke's house casts a 6-foot shadow at the same time as the house casts a 22-foot shadow. If the tree is 9 feet tall, how tall is the house?

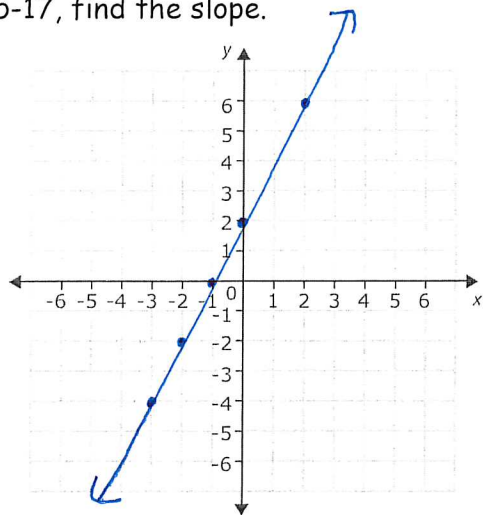
In #13 & 14, tell whether the given function is linear. If not...why?

13. $f(x) = 2x^3 - 6$

14. $f(x) = \frac{2}{3}x + 7$

In #15-17, find the slope.

15.



$m =$ _____

16. line passing through $(-5, -4)$ and $(0, 16)$

$m =$ _____

17. line passing through $(2, 4)$ and $(6, 8)$

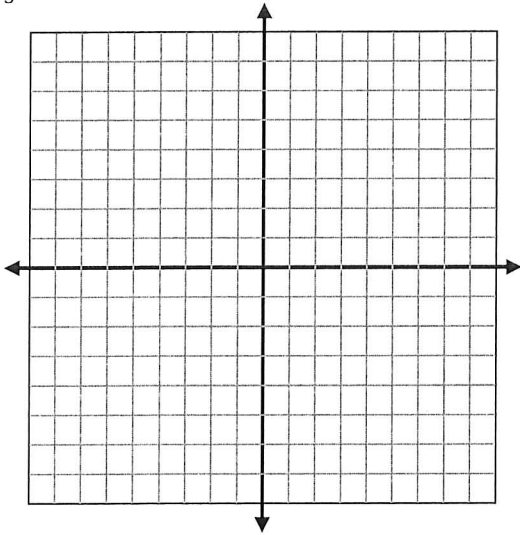
$m =$ _____

In #18 & 19, graph the following functions using slope and the y-intercept.

18. $f(x) = -\frac{2}{5}x + 1$

m = _____

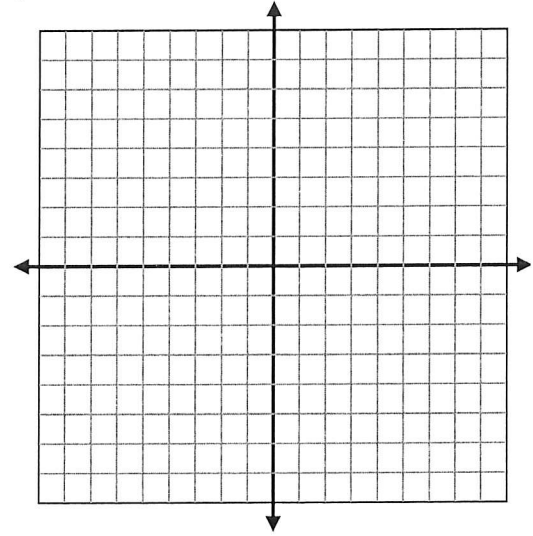
b = _____



19. $-3x + 2y = 6$

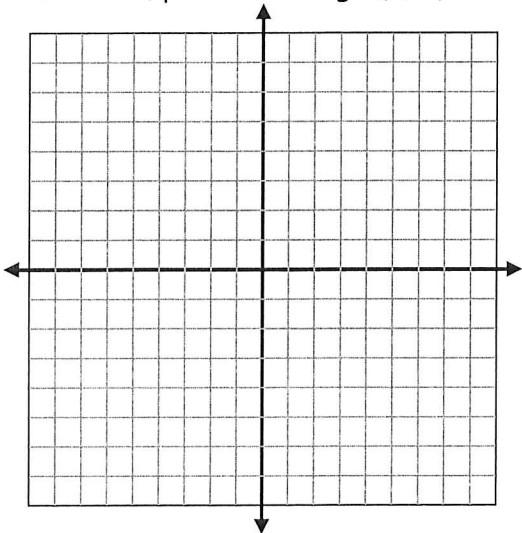
m = _____

b = _____



In #20 & 21, graph using the slope and a point.

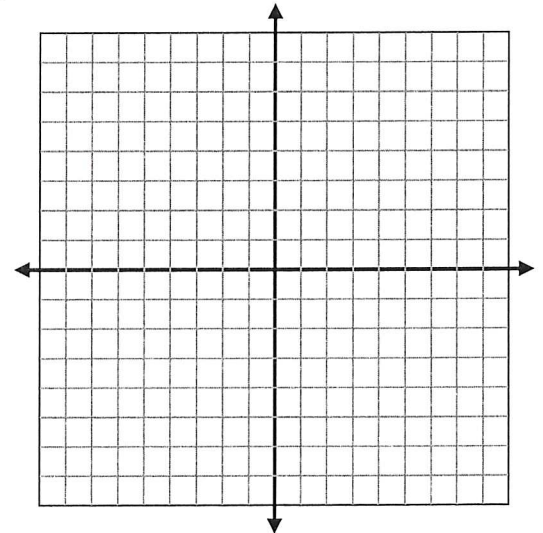
20. $m = -2$, passes through $(1, 5)$



21. $y - 5 = -3(x + 1)$

m = _____

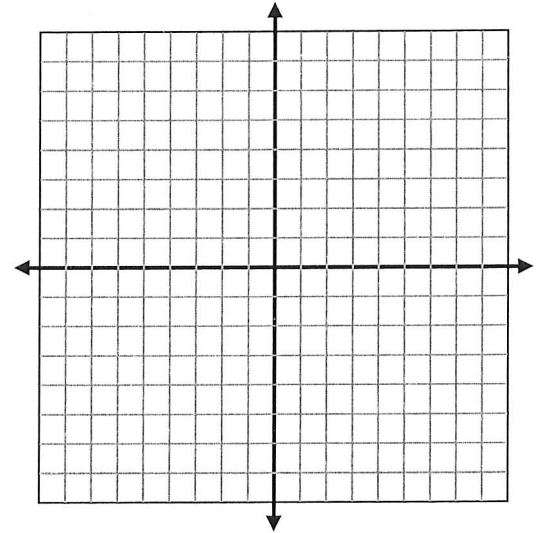
point = _____



Graph using a table.

22. $-2x - 3y = 9$

x	y

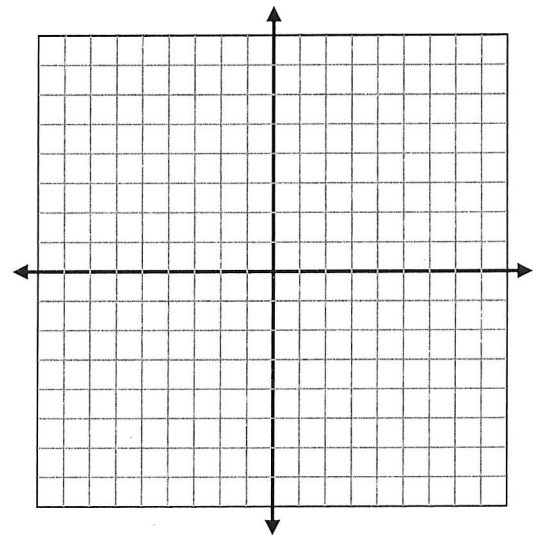


In #23 & 24, graph using the x and y-intercepts.

23. $f(x) = 2x + 1$

x - intercept: _____

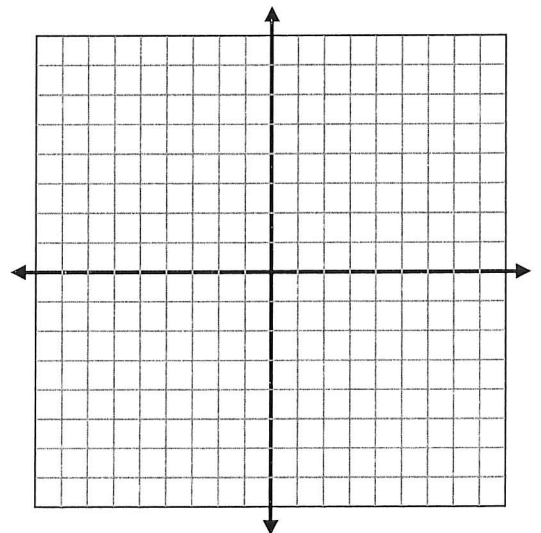
y - intercept: _____



24. $2x - 2y = 8$

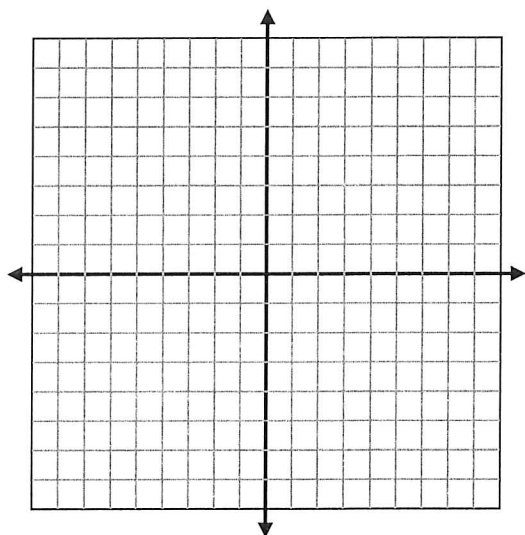
x - intercept: _____

y - intercept: _____

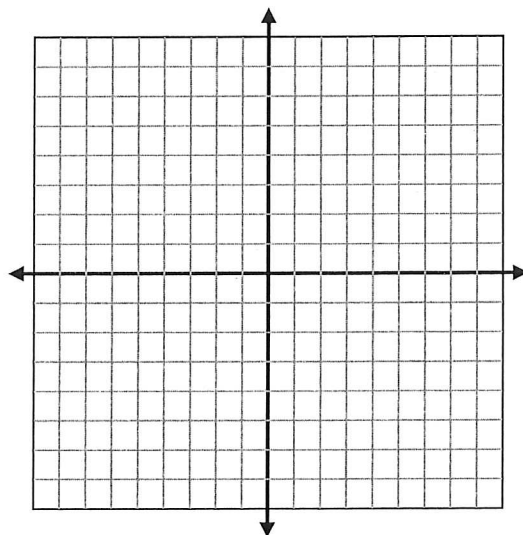


In #25 & 26, graph each line.

25. $x = -2$

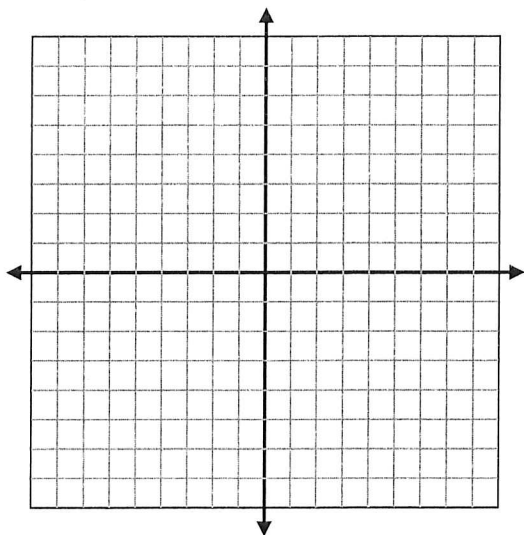


26. $y = 5$

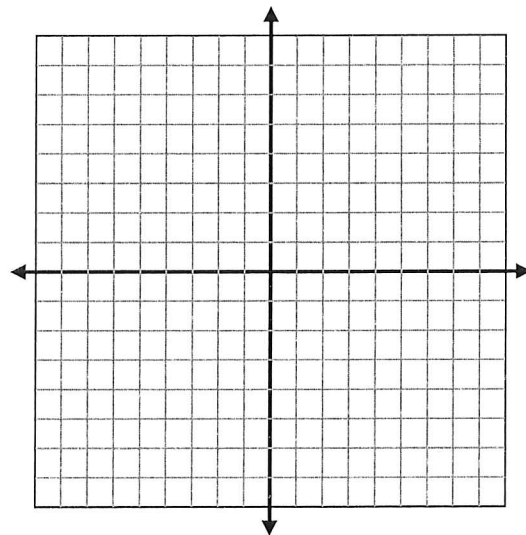


In #27 & 28, graph each linear inequality.

27. $y < -2x + 2$

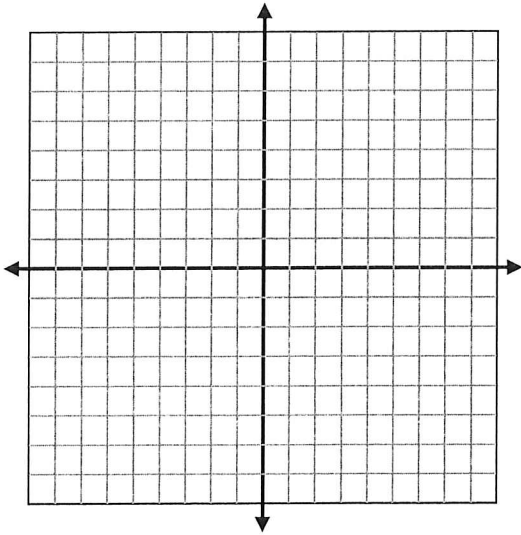


28. $3x - 4y > 5x + 12$



29. Dorothy has \$30 to spend on holiday cards. Large cards cost \$2.50 each and small cards cost \$1.50 each.

a.) Write and graph an inequality for the number of cards Dorothy can purchase.



b.) If Dorothy buys 5 large cards and 8 small cards will she be over budget?

In #30-45:

Find the equation for each and write it in slope-intercept form AND point-slope form.

30. $m = -5$ and $b = 6$

31. Slope is $-\frac{1}{2}$ and y - intercept is 5

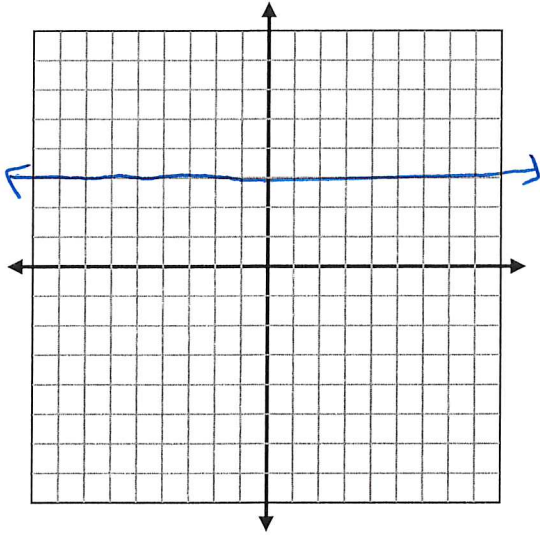
32. Line passes through (2, 6) and has a slope of -2

33. Line passes through (0, 5) and has a slope of $\frac{2}{3}$

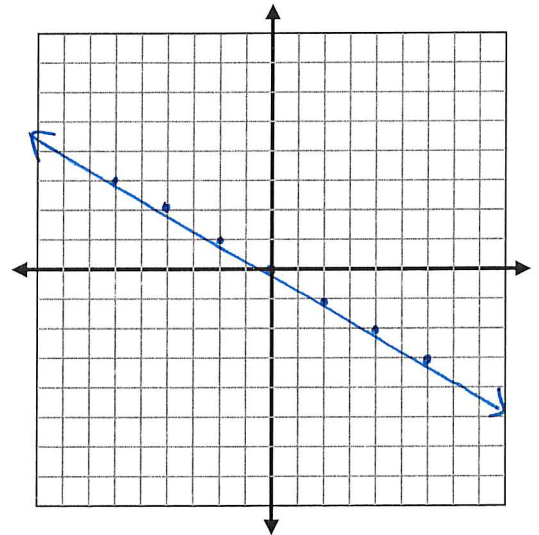
34. Line passes through (3, 12) and (6, 27)

35. Line passes through points $f(-2) = 6$ and $f(4) = 12$

36.



37.



38. Parallel to $y = \frac{3}{2}x - 6$ and through $(-6, 2)$

39. Passes through $(4, 7)$ and is parallel to the line $2x + 2y = 6$

40. Passes through $(5, 3)$ and is perpendicular to $5x + 2y = 8$

41. Perpendicular to $y = -2x + 6$ and through $(4, 9)$

42. Line passes through $(-5, 2)$ and $(-5, 3)$

43. Line with a slope of 0, passing through $(4, 6)$

44. Line passes through $(-3, -1)$ and perpendicular to $y = -2$

45. Line passes through $(5, 8)$ and parallel to $x = 5$
