DMS Pre-Algebra to Algebra

Name_____

Summer Math

Date_____

Solve each equation.

1) $-7(-8x + 7) = 231$

2) $210 = 6(4p + 7)$

3) $132 = 2 + 5(5a - 4)$

4) $-3(7x + 2) - 2x = 178$

5) $-242 = 7(8x - 2) + x$

6) $-94 = 6x + 7(-3x - 7)$

7) $88 = 8(x + 3)$

8) $8(2n - 2) = 96$

9) $146 = 8 - 6(-7 + 8b)$

10) $-3(1 - 7x) = 165$

11) $-322 = x + 8(1 - 7x)$

12) $-130 = -4(1 + 6m) + 6m$

13) $-86 = -4n - (8n + 2)$

14) $172 = 4(8n - 5)$

15) $6(-3n - 7) = -114$

16) $-88 = -8(v + 4)$

17) $-85 = -5(5 - 2n)$

18) $3(4 + 4r) = -84$

19) $6(n + 7) = 90$

20) $315 = -7(-5 - 8k)$

21) On Tuesday Jenny bought four boxes. On Wednesday half of all the boxes that she had were destroyed. On Thursday there were only 16 left. How many did she have on Monday?

22) Stefan spent \$12 on a magazine and some candy bars. If the magazine cost \$2 and each candy bar cost \$5, then how many candy bars did he buy?

23) Carlos was going to sell all of his stamp collection to buy a video game. After selling half of them he changed his mind. He then bought fifteen more. How many did he start with if he now has 25?

24) On Tuesday Jenny bought six CDs. On Wednesday half of all the CDs that she had were destroyed. On Thursday there were only 22 left. How many did she have on Monday?

25) You bought a magazine for \$3 and some erasers for \$4 each. You spent a total of \$31. How many erasers did you buy?

26) Beth rented a bike from Perry's Bikes. It cost \$19 plus \$2 per hour. If Beth paid \$23, then she rented the bike for how many hours?

27) The sum of three consecutive even numbers is 60. What is the smallest of these numbers?

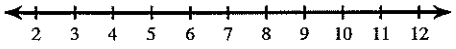
28) Krystal's Bikes rents bikes for \$14 plus \$5 per hour. Alberto paid \$44 to rent a bike. For how many hours did he rent the bike?

29) Half of your baseball card collection got wet and was ruined. You bought 17 cards to replace some that were lost. How many did you begin with if you now have 37?

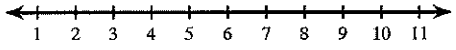
30) Imani had some candy to give to her three children. She first took six pieces for herself and then evenly divided the rest among her children. Each child received five pieces. With how many pieces did she start?

Solve each inequality and graph its solution.

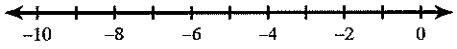
31) $183 \geq -5n - 8(-5n - 1)$



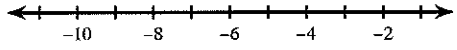
32) $188 \leq -7 - 5(1 - 8v)$



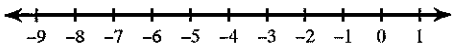
33) $-87 \leq 7(x - 6) + 4$



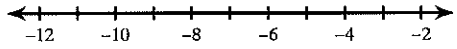
34) $-7(2x - 5) \geq 133$



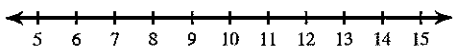
35) $-5n - 2(4n - 8) > 107$



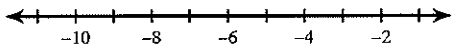
36) $164 \leq k - 8(4k - 5)$



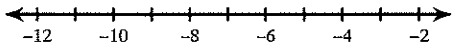
37) $-5 - 3(1 - 5k) > 97$



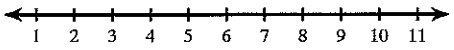
38) $4(8x - 1) \geq -228$



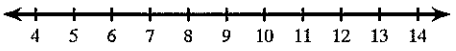
39) $3(4p - 7) \leq -93$



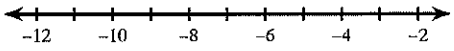
40) $-3(6 + 4b) > -114$



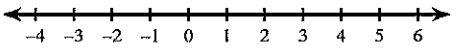
41) $95 < 5(1 + 3n)$



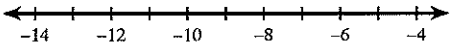
42) $186 < -6(1 + 4x)$



43) $91 < 7(n + 7) + 7n$



44) $-84 \leq 4(5 + 3p) + p$



Answer each question and round your answer to the nearest whole number.

45) The currency in Saudi Arabia is the Riyal. The exchange rate is approximately \$1 for 4 Riyals. At this rate, how many Riyals would you get if you exchanged \$5?

46) Eugene reduced the size of a photo to a width of 4 in. What is the new height if it was originally 16 in wide and 4 in tall?

47) The money used in Egypt is called the Pound. The exchange rate is 6 Pounds = \$1. Find how many Pounds you would receive if you exchanged \$2.

48) The currency in Malaysia is the Ringgit. The exchange rate is approximately 4 Ringgits for \$1. At this rate, how many dollars would you get if you exchanged 12 Ringgits?

49) The money used in China is called the Yuan. The exchange rate is 8 Yuan = \$1. Find how many Yuan you would receive if you exchanged \$3.

50) Mei reduced the size of a frame to a height of 2 in. What is the new width if it was originally 18 in wide and 12 in tall?

Find the slope of each line.

51) $0 = 3x - 48 + 12y$

52) $\frac{15}{2} = 3x - \frac{3}{2}y$

53) $-\frac{1}{4}x = 1 - y$

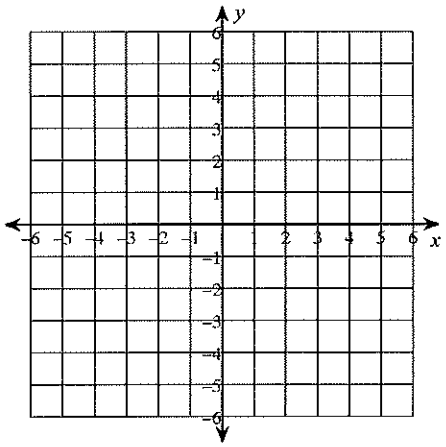
54) $-20 - 4y + 3x = 0$

55) $-\frac{2}{3}x = -1 + \frac{1}{3}y$

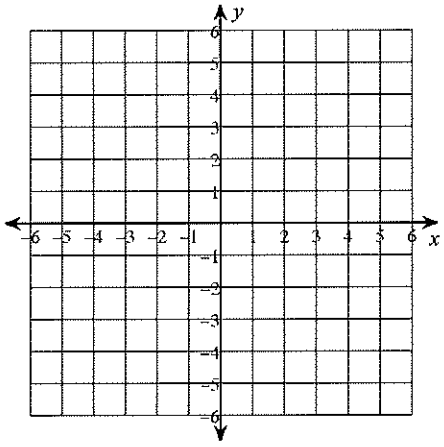
56) $0 = -2x + 10$

Sketch the graph of each line.

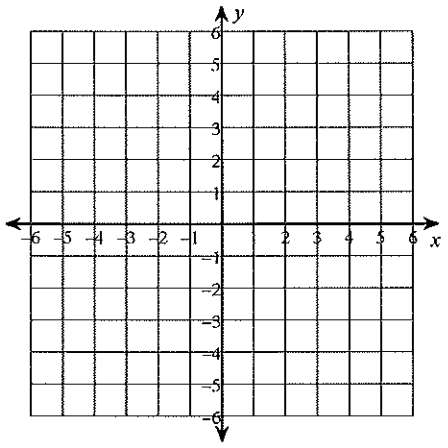
57) $-15 + 3y - 5x = 0$



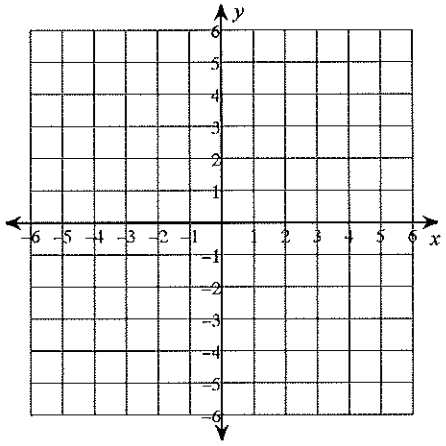
58) $0 = -9 - 3x - 3y$



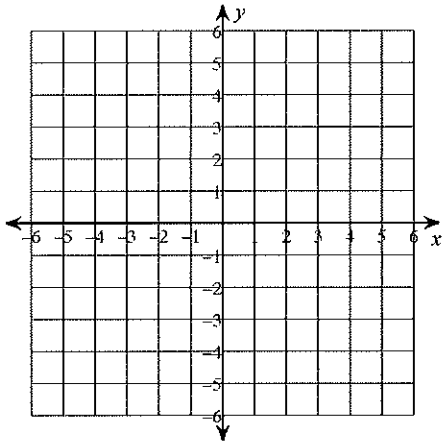
59) $-5 - y + \frac{4}{3}x = 0$



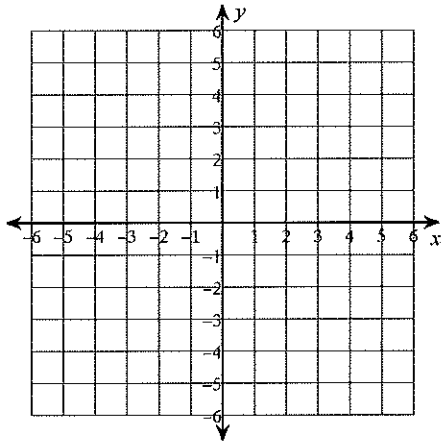
60) $3 + x = -\frac{3}{2}y$



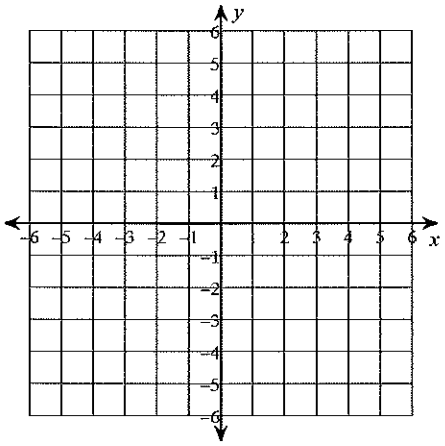
61) $0 = -5y + 25 - 9x$



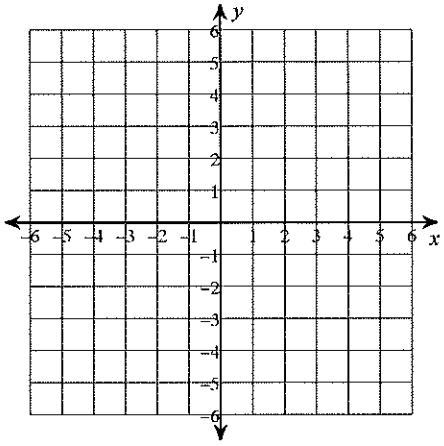
62) $0 = 2y - 4x + 2$



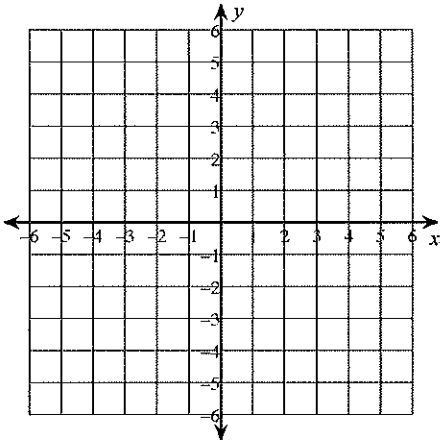
63) $x = -y$



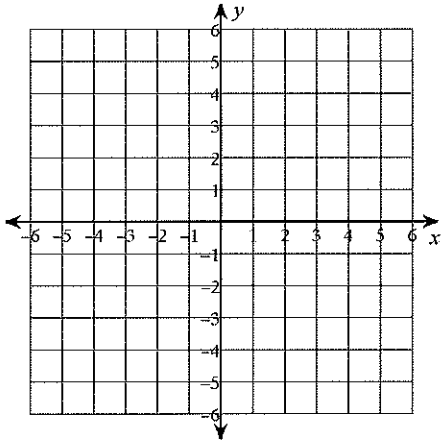
64) $0 = -x + \frac{2}{3}y - \frac{4}{3}$



65) $-2x - y = -5$

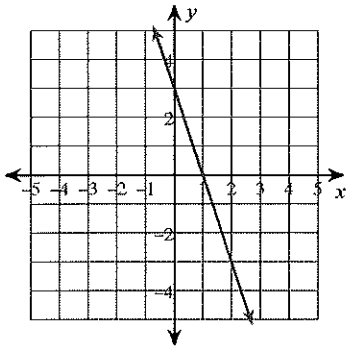


66) $15 + 7x = 3y$

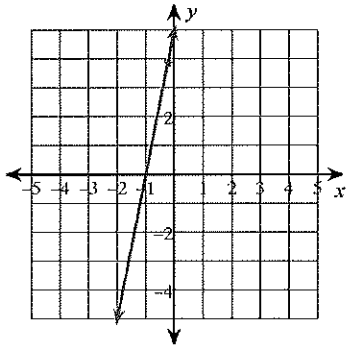


Write the slope-intercept form of the equation of each line.

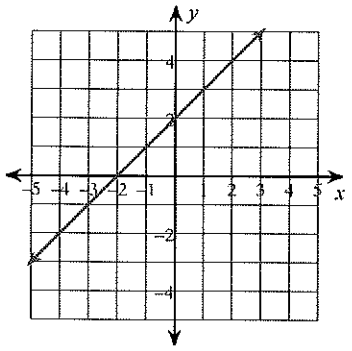
67)



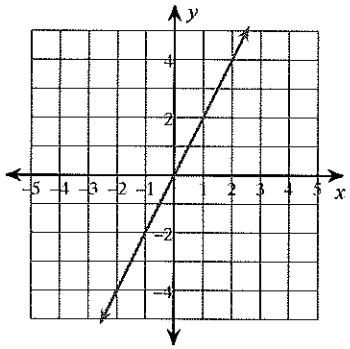
68)



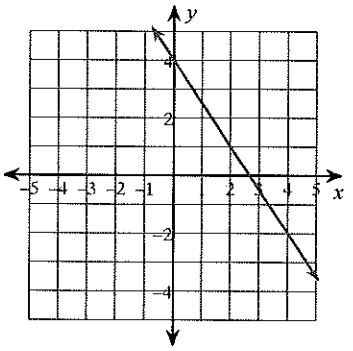
69)



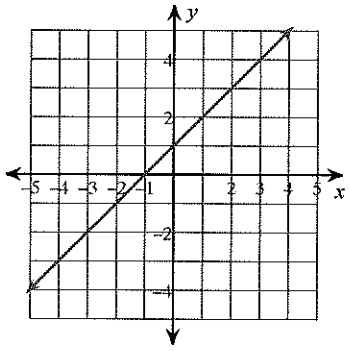
70)



71)



72)



Write the slope-intercept form of the equation of the line through the given points.

73) through: $(-5, 1)$ and $(-5, -3)$

74) through: $(1, 1)$ and $(0, 4)$

75) through: $(2, -4)$ and $(2, 3)$

76) through: $(4, 3)$ and $(2, 3)$

77) through: $(0, -2)$ and $(-4, 1)$

78) through: $(5, -3)$ and $(5, -2)$

79) through: $(5, -2)$ and $(0, -3)$

80) through: $(-3, 2)$ and $(-1, 4)$