

Name: \_\_\_\_\_  
 Date: Key  
 Period: \_\_\_\_\_

Algebra 1 Semester 2 Final Study Guide

1. Order  $-0.25, \frac{2}{3}, -0.2, \frac{1}{5}, 0.1, -\frac{3}{8}$  from least to greatest

~~$-0.25, 0.\bar{4}, -0.2, 0.2, 0.1, -0.375$~~   
 $-\frac{3}{8}, -0.25, -0.2, 0.1, \frac{1}{5}, \frac{2}{3}$

2. Find each sum or difference. Write your answer in simplest form.

a.  
 $\frac{3}{3} \cdot \frac{2}{5} + \left(-\frac{1}{15}\right)$   
 $\frac{6}{15} - \frac{1}{15} = \frac{5}{15} = \frac{1}{3}$

b.  
 $4 \cdot \frac{3}{4} - \left(-\frac{5}{16}\right)$   
 $-12 + \frac{5}{16} = \frac{-7}{16}$

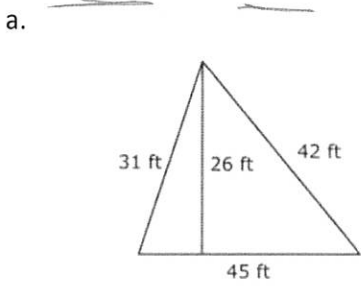
3. Find each product or quotient. Write your answer in simplest form.

a.  
 $\frac{4}{9} \cdot \frac{3}{7} = \frac{12}{63} \div 3 = \frac{4}{21}$

b.  
 $\frac{3}{4} \div \frac{11}{3}$

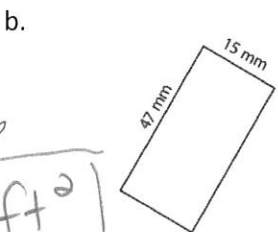
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 $\frac{3}{4} \cdot \frac{3}{11} = \frac{9}{44}$

4. Find the PERIMETER and AREA of each figure



$A = \frac{1}{2}bh$   
 $A = \frac{1}{2} \cdot 45 \cdot 26$   
 $A = 585 \text{ ft}^2$

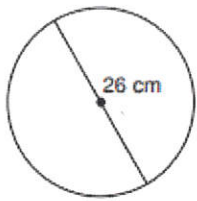
$P = a + b + c$   
 $P = 31 + 42 + 45$   
 $P = 108 \text{ ft}$



$P = 2l + 2w$   
 $= 2 \cdot 47 + 2 \cdot 15$   
 $P = 94 + 30$   
 $P = 124 \text{ mm}$

$A = lw$   
 $A = 47 \cdot 15$   
 $A = 705 \text{ mm}^2$

5. Find the **CIRCUMFERENCE** and **AREA** of the circle. Round to the nearest 10<sup>th</sup>.



$$\frac{26}{2}$$

$$r = 13$$

$$C = 2r\pi \text{ or } C = d\pi$$

$$C = 26 \cdot \pi = 81.68140899$$

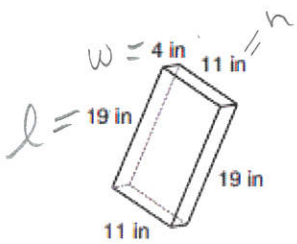
$$C \approx 81.7 \text{ cm}$$

$$A = \pi r^2$$

$$A = \pi \cdot 13^2 \approx 530.9291585$$

$$A = 530.9 \text{ cm}^2$$

6. Find the **VOLUME** and **SURFACE AREA** the rectangular prism.



$$V = lwh$$

$$V = 19 \cdot 4 \cdot 11$$

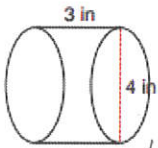
$$V = 836 \text{ in}^3$$

$$SA = 2lw + 2lh + 2wh$$

$$SA = 2 \cdot 19 \cdot 4 + 2 \cdot 19 \cdot 11 + 2 \cdot 4 \cdot 11$$

$$SA = 658 \text{ in}^2$$

7. Find the **VOLUME** and **SURFACE AREA** of the cylinder. Round to the nearest 10<sup>th</sup>.



$$\frac{4}{2} = 2$$

$$r = 2$$

$$V = \pi r^2 h$$

$$V = \pi \cdot 2^2 \cdot 3$$

$$V = 37.69911184$$

$$V \approx 37.7 \text{ in}^3$$

$$SA = 2\pi rh + 2\pi r^2$$

$$SA = 2\pi \cdot 2 \cdot 3 + 2\pi \cdot 2^2$$

$$SA \approx 62.83185307$$

$$SA \approx 62.8 \text{ in}^2$$

8. Find the **MEAN**, **MEDIAN**, and **MODE** for the given data set. {32, 21, 37, 42, 32, 40, 37, 25}

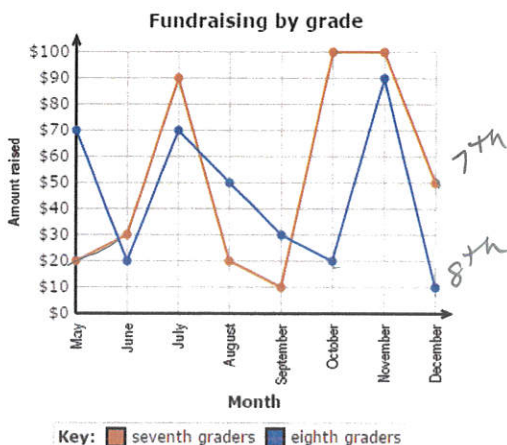
$$\text{mean: } \frac{32 + 21 + 37 + 42 + 32 + 40 + 37 + 25}{8} = \frac{246}{8} \approx 30.75$$

$$\text{median: } 21, 25, 32, 32, 37, 37, 40, 42$$

$$\frac{32 + 37}{2} = \frac{69}{2} = 34.5$$

$$\text{mode: } 32, 37$$

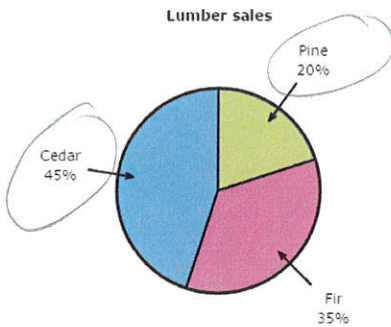
9. Given the line graph below how much more did the 7<sup>th</sup> grade earn than the 8<sup>th</sup> grade in October?



$$100 - 20 = 80$$

The 7<sup>th</sup> grade earned \$80 more than 8<sup>th</sup> grade

10. If a total of 80 boards were sold how many more cedar boards were sold than pine boards.

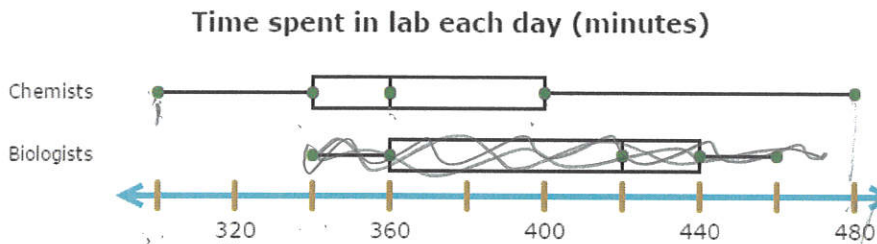


Pine  $80 \cdot .2 = 16$  pine  
 $80 \cdot .45 = 36$  cedar

$36 - 16 = 20$

There <sup>were</sup> 20 more cedar boards sold than pine boards

11. What is the minimum, mean, maximum, and interquartile range for Chemists?



min: 300  
 max: 480  
 mean: 340  
 IQR: 400 - 340  
 IQR = 60

Write a verbal expression for each algebraic expression

12.  $16u^2 - 3$

Sixteen times u squared minus three.

13.  $\frac{7x^4}{2}$

Seven x to the fourth power divided by two

# PEMDAS

Evaluate each expression

14.  $6[32 - (2+3)^2]$

$$6[32 - 5^2]$$

$$6[32 - 25]$$

$$6 \cdot 7 = \boxed{42}$$

$$15. \frac{(5-8)^3 + 9}{(-1+2^2+3)} = \frac{(-3)^3 + 9}{(-1+4+3)} = \frac{-27+9}{6} = \frac{-18}{6} = \boxed{-3}$$

16. Evaluate  $3x^2 + (2y + z^3)$  if  $x=4$ ,  $y=5$ , and  $z=3$ .

$$3 \cdot 4^2 + (2 \cdot 5 + 3^3)$$

$$3 \cdot 16 + (10 + 27)$$

$$48 + 37$$

$$\boxed{85}$$

17. Evaluate  $7a - 3b^3 + 4c - a^2$  if  $a=2$ ,  $b=6$ , and  $c=8$ .

$$7 \cdot 2 - 3 \cdot 6^3 + 4 \cdot 8 - 2^2$$

$$14 - 3 \cdot 216 + 32 - 4$$

$$14 - 648 + 32 - 4$$

$$\boxed{-606}$$

Solve each equation.

18.  $6 + (5^2 - 5) \div 2 = p$

$6 + (25 - 5) \div 2 = p$

$6 + 20 \div 2 = p$

$6 + 10 = p$

$16 = p$

$p = 16$

True Statement  
 $36 = 36$   $2 = 2$   
 or  $\infty$

False Statement  
 $36 = 32$   $\emptyset$   
 $-1 = 5$

19.  $12(10 - 7) + 9g = g(2^2 + 5) + 36$

$12 \cdot 3 + 9g = g(4 + 5) + 36$

$36 + 9g = g \cdot 9 + 36$

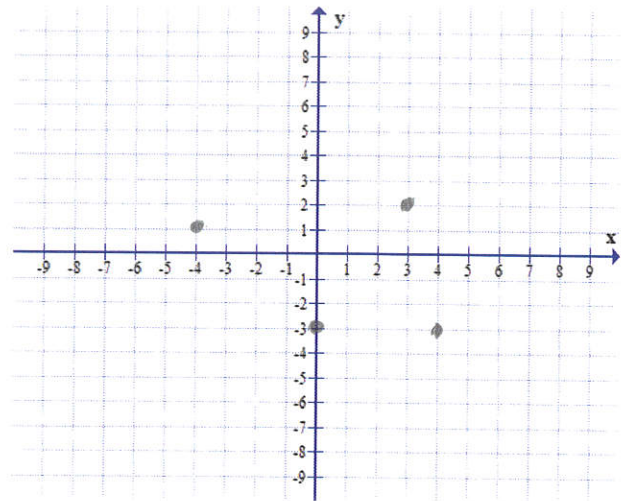
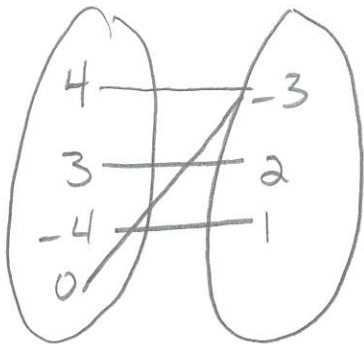
$36 + 9g = 9g + 36$

$\frac{-9g \quad -9g}{36 = 36}$



20. Express  $\{(4, -3)(3, 2)(-4, 1)(0, -3)\}$  as a table, graph, and a mapping diagram.

x	y
4	-3
3	2
-4	1
0	-3



21. State the domain and range of the relation  $\{(1, 6)(2, 4)(3, 7)(-2, 3)(1, 5)\}$ . Is this relation a function?

Domain:  $\{1, 2, 3, -2\}$   
 x-values

Range:  $\{6, 4, 7, 3, 5\}$   
 y-values

Repeat x-values  
 w/ different y-value

No because  
 $1 \rightarrow 6$  and  
 $1 \rightarrow 5$

**Identify the independent and dependent variable for each relation**

22. The faster you drive your car the longer it will take you come to a complete stop

Stop depends on speed

ind: Speed  
depend: stop

23. Joe is buying concert tickets. The more tickets he buys the greater his cost.

Cost depends on # of tickets

ind: # of tickets  
depend: Cost

24. For  $f(x) = 5x - 4$  find each value

a.  $f(3)$        $x = 3$

$$f(3) = 5 \cdot 3 - 4$$
$$= 15 - 4$$

$$f(3) = 11$$

b.  $f(-3) + f(5)$

$x = -3$        $x = 5$

$$f(-3) = 5 \cdot -3 - 4$$
$$= -15 - 4$$

$$f(-3) = -19$$

$$f(5) = 5 \cdot 5 - 4$$
$$= 25 - 4$$

$$f(5) = 21$$

$$f(-3) + f(5) = -19 + 21$$

$$f(-3) + f(5) = 2$$



Solve each equation

$$25. \frac{m}{6} - 3 = 8$$

$$\frac{m}{6} + 3 + 3 = 11 + 3$$

$$\frac{m}{6} = 14$$

$$m = 84$$

$$26. -4 = \frac{d+3}{5}$$

$$-20 = d + 3$$

$$-3 \quad -3$$

$$-23 = d$$

$$d = -23$$

Write an equation and solve each problem

27. Three less than three fourths of a number is negative 9. Find the number

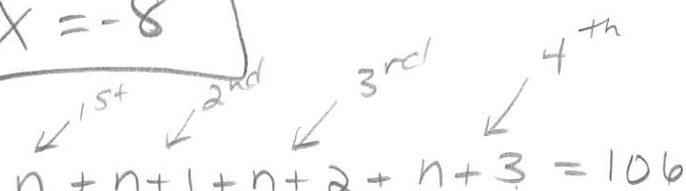
$$\frac{3}{4}x - 3 = -9$$

$$x = -\frac{24}{3}$$

$$\frac{3}{4}x = -6$$

$$x = -6 \cdot \frac{4}{3}$$

$$x = -8$$



28. Find four consecutive integers with a sum of 106.

$$n + n + 1 + n + 2 + n + 3 = 106$$

$$4n + 6 = 106$$

$$-6 \quad -6$$

$$4n = 100$$

$$25, 26, 27, 28$$

$$\frac{4n}{4} = \frac{100}{4}$$

$$n = 25$$

Solve each equation

$$29. \frac{3}{4}w + 6 = 9 - \frac{1}{4}w$$

$$\begin{array}{r} +\frac{1}{4}w \quad +\frac{1}{4}w \\ \hline w + 6 = 9 \\ -6 \quad -6 \\ \hline w = 3 \end{array}$$

$$30. \frac{z+6}{3} = \frac{2z}{4} + 4$$

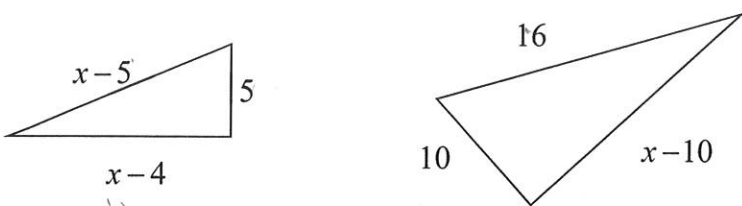
$$4(z+6) = 3(2z) + 48$$

$$4z + 24 = 6z + 48$$

$$\begin{array}{r} -4z \quad -4z \\ \hline 24 = 2z \\ \frac{24}{2} = \frac{2z}{2} \quad 12 = z \end{array}$$

$$z = 12$$

31. Find the value of  $x$  so that the triangles have the same perimeter.

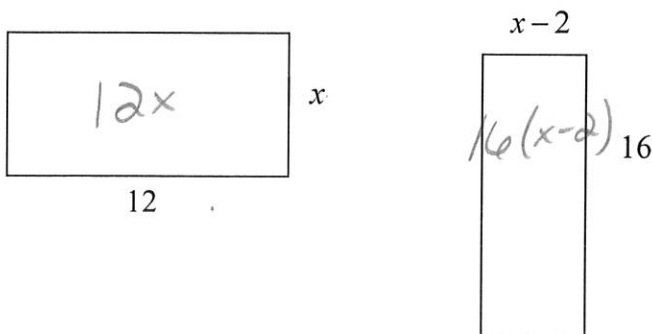


$$x - 5 + 5 + x - 4 = 16 + 10 + x - 10$$

$$2x - 4 = x + 16$$

$$\begin{array}{r} -x \quad -x \\ \hline x - 4 = 16 \\ +4 \quad +4 \\ \hline x = 20 \end{array}$$

32. Find the value of  $x$  so that the rectangles have the same area.



$$12x = 16(x-2)$$

$$12x = 16x - 32$$

$$\begin{array}{r} -16x \quad -16x \\ \hline -4x = -32 \\ \frac{-4}{-4} \quad \frac{-32}{-4} \\ \hline x = 8 \end{array}$$

$$0 = 4x - 32$$



Evaluate each expression if  $x = -4$ ,  $y = 7$ , and  $z = 9$ .

33.  $|3x - 2| + 2y$

$$|3 \cdot (-4) - 2| + 2 \cdot 7$$

$$|-12 - 2| + 14$$

$$|-14| + 14$$

$$14 + 14 = \boxed{28}$$

34.  $|-4y + 2z| - 7z$

$$|-4 \cdot 7 + 2 \cdot 9| - 7 \cdot 9$$

$$|-28 + 18| - 63$$

$$|-10| - 63$$

$$10 - 63 = \boxed{-53}$$

Solve each absolute value equation

35.  $|6m - 3| = 9$

Case 1

$$\begin{array}{r} 6m - 3 = 9 \\ +3 \quad +3 \\ \hline \end{array}$$

$$\frac{6m}{6} = \frac{12}{6}$$

$$\boxed{m = 2 \text{ or } m = -1}$$

Case 2

$$\begin{array}{r} 6m - 3 = -9 \\ +3 \quad +3 \\ \hline \end{array}$$

$$\frac{6m}{6} = \frac{-6}{6}$$

36.  $|2x + 2| + 3 = 11$

$$\frac{-3 \quad -3}{-3 \quad -3}$$

$$|2x + 2| = 8$$

Case 1

$$\begin{array}{r} 2x + 2 = 8 \\ -2 \quad -2 \\ \hline \end{array}$$

$$\frac{2x}{2} = \frac{6}{2}$$

$$\boxed{x = 3 \text{ or } x = -5}$$

Case 2

$$\begin{array}{r} 2x + 2 = -8 \\ -2 \quad -2 \\ \hline \end{array}$$

$$\frac{2x}{2} = \frac{-10}{2}$$

Determine whether each pair of ratios are equivalent ratios

37.  $\frac{5}{8}, \frac{10}{15}$  ?

$$5 \div 8 = 10 \div 15$$

$$5 \cdot 15 \stackrel{?}{=} 8 \cdot 10$$

$$75 \neq 80$$

No

38.  $\frac{0.1}{0.2}, \frac{0.45}{0.9}$  ?

$$0.1 \cdot 0.9 \stackrel{?}{=} 0.2 \cdot 0.45$$

$$0.09 = 0.09$$

yes

Solve each proportion. If necessary, round to the nearest hundredth.

39.  $\frac{-3}{x} = \frac{2}{8}$

$$\frac{2x}{2} = \frac{-24}{2}$$

$$x = -12$$

40.  $\frac{x+1}{4} = \frac{3}{4}$

$$4(x+1) = 12$$

$$\begin{array}{r} 4x + 4 = 12 \\ -4 \quad -4 \end{array}$$

$$\frac{4x}{4} = \frac{8}{4}$$

$$x = 2$$

$$\frac{\text{is}}{\text{of}} = \frac{\%}{100}$$

41. Find each value/percent.

a. What is 23% of 46?

$$0.23 \cdot 46$$
$$\boxed{10.58}$$

b. 75 is what percent of 225?

$$\frac{75}{225} = \frac{x}{100}$$
$$\frac{225x}{225} = \frac{7500}{225}$$
$$\boxed{x = 33.\bar{3}\%}$$

$$\frac{\text{original} - \text{New}}{\text{original}} \times 100$$

c. 37.5 is 60% of what number?

$$\frac{37.5}{x} = \frac{60}{100}$$
$$\frac{60x}{60} = \frac{3750}{60}$$
$$\boxed{x = 62.5}$$

d. What percent of 175 is 35?

$$\frac{35}{175} = \frac{x}{100}$$
$$\frac{175x}{175} = \frac{3500}{175}$$
$$\boxed{x = 20}$$

42. Find each percent change. Tell whether it is a percent increase or decrease. Round your answer to the nearest percent.

a. From 180 to 234

$$\frac{180 - 234}{180} \cdot 100$$
$$-\frac{54}{180} \cdot 100$$
$$-0.3 \cdot 100$$
$$\boxed{30\% \text{ increase}}$$

b. From 56 to 21

$$\frac{56 - 21}{56} \cdot 100$$
$$\frac{35}{56} \cdot 100$$
$$0.625 \cdot 100$$
$$\boxed{62.5\% \text{ decrease}}$$

43. A leather jacket that originally costs \$175.00 is on sale for 35% off. What is the sale price of the jacket?

$$100\% - 35\% = 65\%$$

$$0.65 \cdot 175 = \boxed{\$113.75}$$

The sale price of the jacket is \$113.75

$$100\% - 20\% = 80\%$$

Find the final price of each item

44. Lamp: \$120.00, Discount: 20%

$$.8 \cdot 120 = \boxed{\$96}$$

45. Camera \$58.00, Tax 6.5%

$$100\% + 6.5\% = 106.5\%$$

$$1.065 \cdot 58 = \boxed{\$61.77}$$

Solve each equation for the variable indicated.

46.  $15 = 3n + 6p$  for  $n$

$$\begin{array}{r} -6p \quad -6p \\ \hline 15 - 6p = 3n \\ \hline 3 \qquad 3 \end{array}$$

$$\boxed{n = \frac{15 - 6p}{3}} \quad \text{or}$$
$$\boxed{n = 5 - 2p}$$

47.  $\frac{k-2}{5} = 11j$  for  $k$

$$\begin{array}{r} k-2 = 55j \\ +2 \qquad +2 \end{array}$$

$$\boxed{k = 55j + 2}$$

48. Determine whether each equation is a linear equation.

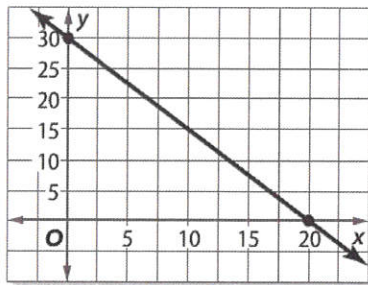
a.  $y = 4 - 3x$

$\boxed{\text{yes}}$

b.  $6x - xy = 4$

$\boxed{\text{No because } x \cdot y}$

49. Find the x- and y-intercept of the line.



y-intercept = 30  
x-intercept = 20

50. The table shows the function relating the distance to an amusement park in miles and the time in hours the Brown family has driven. Find the x- and y-intercepts and describe what they mean in this situation.

Time (h)	Distance (mi)
0	248
1	186
2	124
3	62
4	0

y-intercept = 248 miles  
At the start (zero time) you have 248 miles to go.

x-intercept = 4 hrs.  
After 4 hrs you have zero mile to go

51. Determine whether each function is linear. Explain.

a.

x	y
-3	11
-2	15
-1	19
1	23
2	27

No  
not  
constant

b.

x	y
12	-4
9	1
6	6
3	11
0	16

yes  
it's  
constant

52. Find the slope of a line that passes through each pair of points

a. (-3, 4) and (2, -3)

$$m = \frac{y_2 - y_1}{x_2 - x_1}$$

$$m = \frac{-3 - 4}{2 - (-3)} = \frac{-7}{5}$$

b. (-3, -1) and (2, -1)

$$m = \frac{-1 - (-1)}{2 - (-3)} = \frac{0}{5} = 0$$

\*  $\frac{5}{0}$  = und Notes

$$y = kx$$

53. Suppose  $y$  varies directly as  $x$  and  $y = 72$  when  $x = 8$ . Find  $x$  when  $y = 63$ .

$$\frac{72}{8} = \frac{k \cdot 8}{8}$$

$$k = 9$$

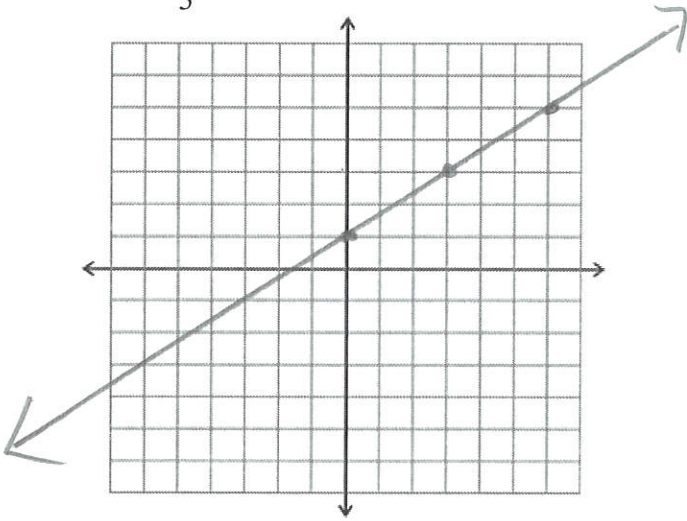
$$y = 9x$$

$$\frac{63}{9} = \frac{9 \cdot x}{9}$$

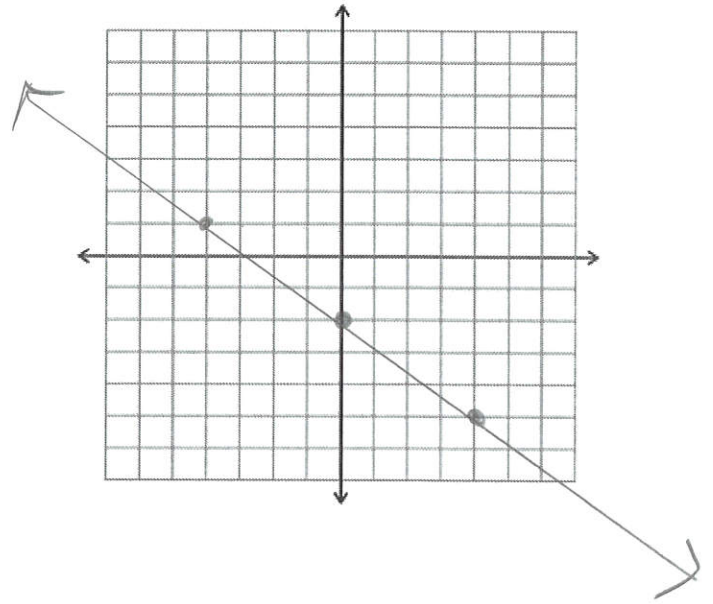
$$x = 7$$

54. Graph each equation.

a.  $y = \frac{2}{3}x + 1$

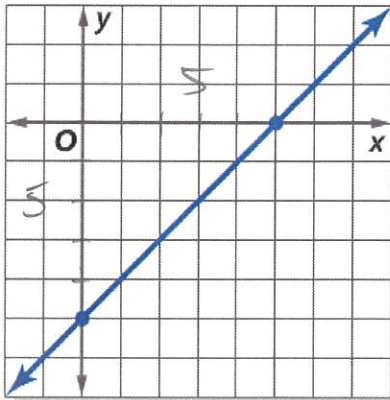


b.  $y = -\frac{3}{4}x - 2$



55. Write an equation for each graph.

a.



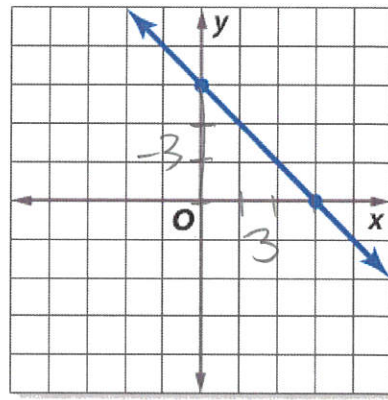
$$m = \frac{5}{5}$$

$$m = 1$$

$$b = -5$$

$$y = x - 5$$

b.



$$m = \frac{-3}{3}$$

$$m = -1$$

$$b = 3$$

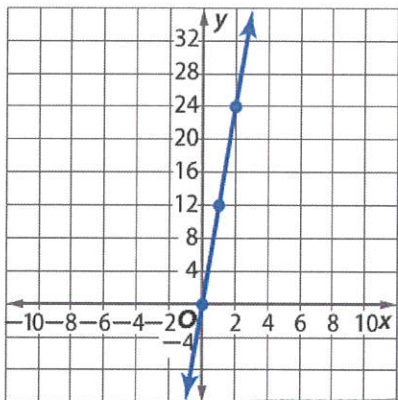
$$y = -x + 3$$



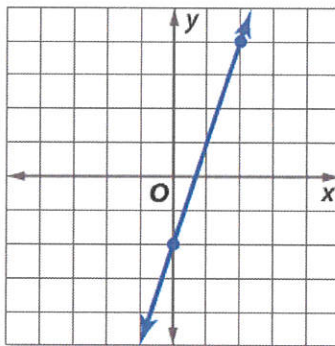
passes through (0,0)

56. Determine whether each function is proportional or non-proportional.

a.



proportional



Non-proportional

57. Write an equation of each line in slope intercept form

a. slope:  $-\frac{5}{8}$ , y-intercept -2

$$y = -\frac{5}{8}x - 2$$

b. passing through (2, -1) and (5, 2)

$$m = \frac{2 - (-1)}{5 - 2} = \frac{3}{3} = 1$$

$$y - 2 = 1(x - 5)$$

$$y - 2 = x - 5$$

$$y = x - 3$$

58. Write an equation in slope-intercept form that passes through the given point and is parallel to the given equation.

a. (-4, 1),  $y = -2x - 6$

$$m = -2$$

$$y - 1 = -2(x - (-4))$$

$$y - 1 = -2x - 8$$

$$y = -2x - 7$$

b. (-5, -2),  $y = \frac{1}{2}x + 4$

same m

$$m = \frac{1}{2}$$

$$y - (-2) = \frac{1}{2}(x - (-5))$$

$$y + 2 = \frac{1}{2}(x + 5)$$

$$y + 2 = \frac{1}{2}x + 2.5$$

$$y = \frac{1}{2}x + 0.5$$



59. Write an equation in slope-intercept form that passes through the given point and is perpendicular to the given equation.

a. (2,4),  $y = 3x + 1$

$$m = 3 \Rightarrow m = -\frac{1}{3}$$

$$y - 4 = -\frac{1}{3}(x - 2)$$

$$y - 4 = -\frac{1}{3}x + \frac{2}{3}$$

$$y = -\frac{1}{3}x + 4\frac{2}{3}$$

b. (-6,2),  $y = \frac{2}{3}x + 4$

opposite  
reciprocal  
slope

$$m = \frac{2}{3} \Rightarrow m = -\frac{3}{2}$$

$$y - 2 = -\frac{3}{2}(x - (-6))$$

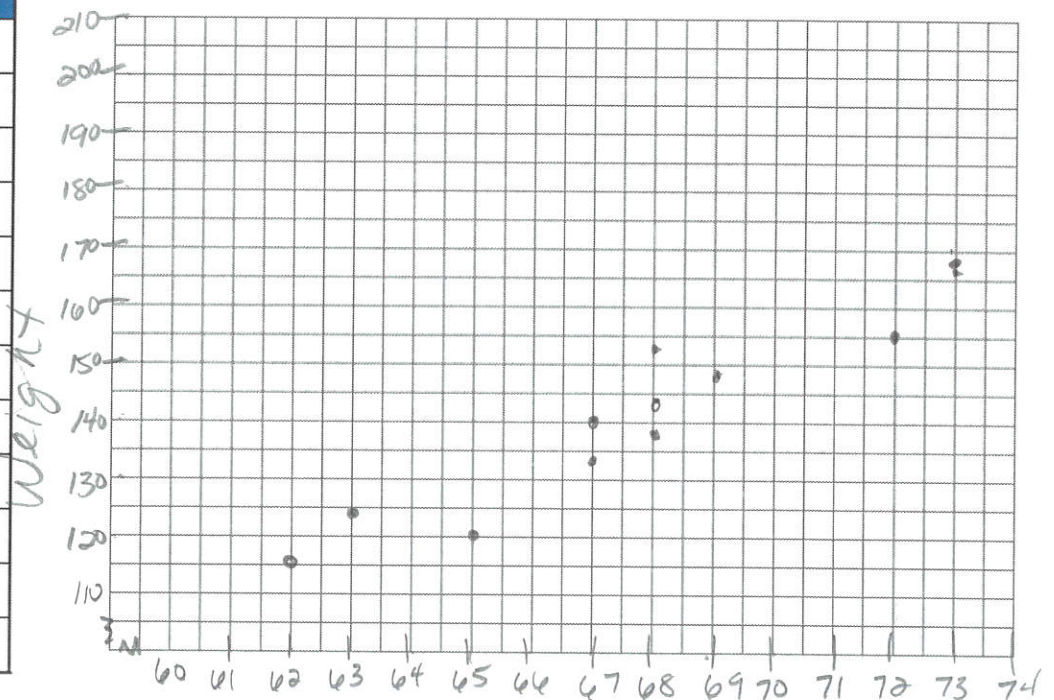
$$y - 2 = -\frac{3}{2}(x + 6)$$

$$y - 2 = -\frac{3}{2}x - 9$$

$$y = -\frac{3}{2}x - 7$$

60. The Body Mass Index (BMI) is a measure of body fat using height and weight. The heights and weight of twelve men with normal BMI are given. Make a scatter plot comparing the height in inches to the weight in pounds

Height (in.)	Weight (lb)
62	115
63	124
65	120
67	134
67	140
68	138
68	144
68	152
69	147
72	155
73	168
73	166



Height

Write an inequality for each situation

61. You must purchase at least 5 tickets to receive a discount.

$$x \geq 5$$

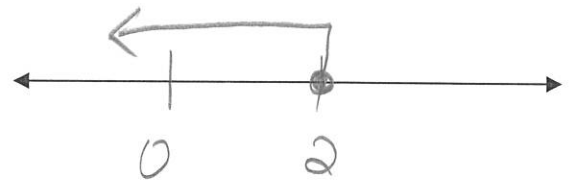
62. Children under 13 are not admitted to certain movies without an adult.

$$x < 13$$

Solve each inequality and graph the solutions.

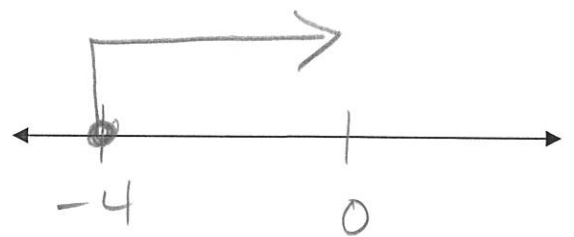
63.  $k + 5 \leq 7$

$$\begin{array}{r} -5 \quad -5 \\ \hline k \leq 2 \end{array}$$



64.  $r - 8 \geq -12$

$$\begin{array}{r} +8 \quad +8 \\ \hline r \geq -4 \end{array}$$



65. Allie must sell at least 50 gift baskets for the band fund-raiser. She already sold 36 baskets. Write and solve an inequality to determine how many more baskets Allie must sell for the fund-raiser.

$x = \#$  of baskets

$$\begin{array}{r} x + 36 \geq 50 \\ -36 \quad -36 \\ \hline x \geq 14 \end{array}$$

Allie must sell at least 14 more baskets

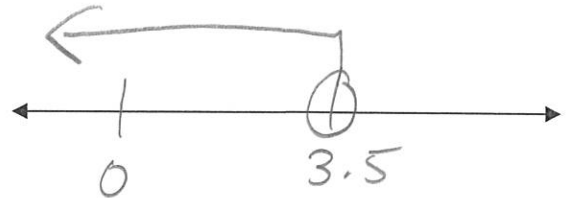
Solve each inequality and graph the solutions.

66.  $-2(x-3) > -1$

$$\begin{array}{r} -2x + 6 > -1 \\ -4 \quad -6 \\ \hline \end{array}$$

$$\begin{array}{r} -2x > -7 \\ -2 \quad -2 \\ \hline \end{array}$$

$$x < 3.5$$



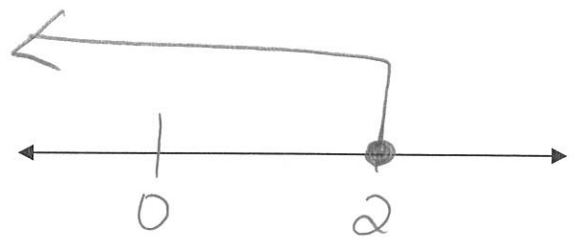
67.  $r - 8 \geq 3r - 12$

$$\begin{array}{r} -3r \quad -3r \\ \hline \end{array}$$

$$\begin{array}{r} -2r - 8 \geq -12 \\ +8 \quad +8 \\ \hline \end{array}$$

$$\begin{array}{r} -2r \geq -4 \\ -2 \quad -2 \\ \hline \end{array}$$

$$r \leq 2$$

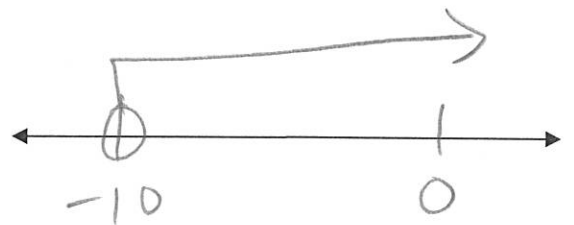


68.  $3(y+6) > 2(y+4)$

$$\begin{array}{r} 3y + 18 > 2y + 8 \\ -18 \quad -18 \\ \hline \end{array}$$

$$\begin{array}{r} 3y > 2y - 10 \\ -2y \quad -2y \\ \hline \end{array}$$

$$y > -10$$



69.  $3(1-x) \geq -3(x+2)$

$$\begin{array}{r} 3 - 3x \geq -3x - 6 \\ +3x \quad +3x \\ \hline \end{array}$$

$$3 \geq -6$$

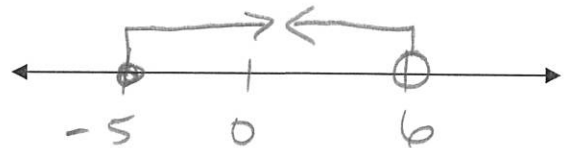
$$\infty \text{ solution}$$



Solve each compound inequality and graph the solutions.

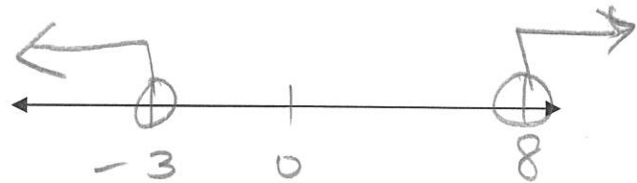
$$70. -2 \leq x + 3 < 9$$

$$\begin{array}{r} -3 \quad -3 \quad -3 \\ \hline -5 \leq x < 6 \end{array}$$



$$71. m + 2 < -1 \text{ OR } m - 2 > 6$$

$$\begin{array}{r} -2 \quad -2 \quad +2 \quad +2 \\ \hline m < -3 \text{ or } m > 8 \end{array}$$



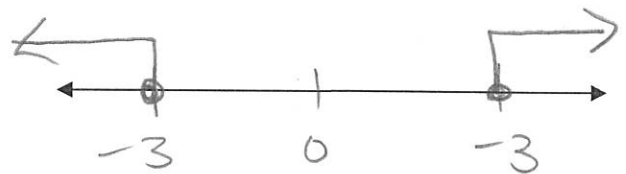
Solve each inequality and graph the solutions.

$$72. |x| + 9 \leq 12$$

$$\begin{array}{r} -9 \quad -9 \\ \hline |x| \leq 3 \end{array}$$

$$\begin{array}{l} \text{Case 1} \\ x \leq 3 \end{array}$$

$$\begin{array}{l} \text{Case 2} \\ x \geq -3 \end{array}$$

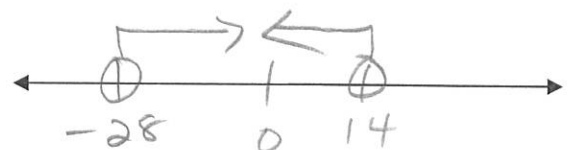


$$73. |x + 7| - 15 < 6$$

$$\begin{array}{r} +15 \quad +15 \\ \hline |x + 7| < 21 \end{array}$$

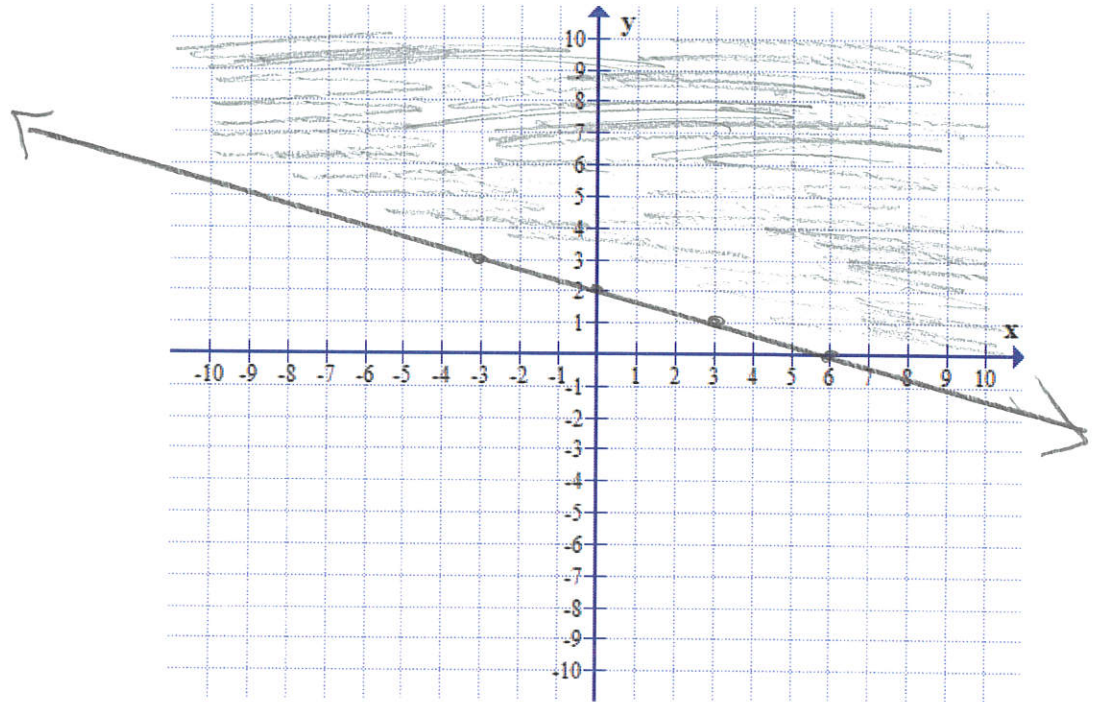
$$\begin{array}{l} \text{Case 1} \\ x + 7 < 21 \\ -7 \quad -7 \\ \hline x < 14 \end{array}$$

$$\begin{array}{l} \text{Case 2} \\ x + 7 > -21 \\ -7 \quad -7 \\ \hline x > -28 \end{array}$$



Graph the solution of each linear inequality

74.  $y \geq -\frac{1}{3}x + 2$



75.  $-2x - y < 1$

$$\begin{array}{r} -2x - y < 1 \\ +2x \quad +2x \\ \hline -y < 2x + 1 \\ \hline -y < 2x + 1 \\ -1 \quad -1 \quad -1 \\ \hline y > -2x - 1 \end{array}$$

