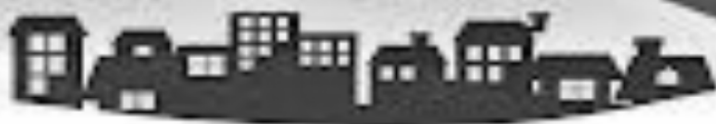


December 9, 2015

Day 2: Review for Nine Weeks Test

*Test Date: **TOMORROW**,*

December 10th



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1. Becca is going to the store to buy new notebooks that cost \$1.75 each. She has only a \$20 bill and needs to save at least \$4 to buy a movie ticket. Write an inequality that could be used solve for the number of notebooks (x) that Becca can buy?

$$20 - 1.75x \geq 4$$

2. A concession stand sells hamburgers (h) for \$3 and hotdogs (d) for \$2. On Friday night they sold a total of 300 hamburgers and hotdogs and made \$740. Write a system of equations to determine how many of each they sold.

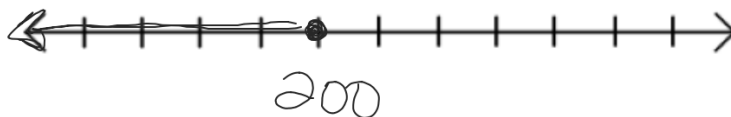
$$\begin{aligned} h + d &= 300 \\ 3h + 2d &= 740 \end{aligned}$$

3. Edith budgets a maximum of \$50 per month for her cell phone bill. Her cell phone provider charges \$30 a month as a base fee plus \$0.10 per minute for usage of the cell phone. Draw a number line that shows how many minutes Edith can use each month and stay within her budget.

$$30 + .10x \leq 50$$

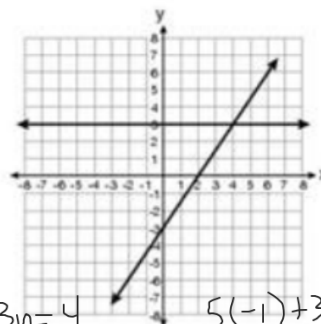
$$.10x \leq 20$$

$$x \leq 200$$



4. What is the solution to the system of equations graphed below?

(4, 3)



5. Solve the following system (hint: Elimination):

$(-1, 3)$

$$\begin{array}{rcl} 5x + 3y = 4 & 5x + 3y = 4 & 5(-1) + 3y = 4 \\ 3(2x - y = -5) & 6x - 3y = -15 & -5 + 3y = 4 \\ \hline 11x & = -11 & 3y = 9 \\ x & = -1 & y = 3 \end{array}$$

6. Solve the following system (hint: Elimination): $2x + 3y = 7$

$$\begin{array}{rcl} -2[2x + 3y = 7] & -4x - 6y = -14 & \\ 4x + 6y = 14 & 4x + 6y = 14 & \\ \hline 0 & = 0 & \end{array}$$

$$\begin{array}{rcl} 6y & = 14 - 4x & \\ +4x & +4x & \end{array}$$

Infinitely many solutions

7. What is the first step to solving this system by elimination?

$$\begin{array}{rcl} 8x - 7y & = & -18 \\ 4x - 6y & = & -24 \end{array}$$

Multiply the 2nd equation by -2

8. What is the first step to solving this system by elimination?

$$7x + y = -24$$

$$7x - y = -18$$

Add

9. Solve for this system of equations.

A class went to the theater for a field trip. A total of 38 tickets were purchased. If each adult ticket was \$6 and each student ticket was \$2 and a total of \$112 was spent on tickets, how many adult and student tickets were purchased?

$$x + y = 38$$

$x = 9$ adult

$$6x + 2y = 112$$

$y = 29$ student

$$-2x - 2y = -76$$

$$\frac{6x + 2y = 112}{4x = 36}$$

$$x = 9$$

$$9 + y = 38$$

$$y = 29$$

10. Graph the solution to this system?

$$x + 2y \geq 8$$

$$x + 2y \geq 8$$

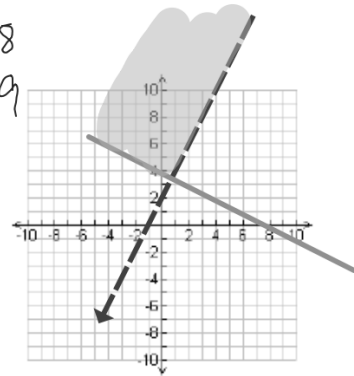
$$2y \geq -x + 8$$

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

$$y - 3x > 1$$

$$+3x + 3x$$

$$y > 3x + 1$$



$$\frac{1500 - 1200}{0 - 10} = \frac{300}{-10} = -30$$

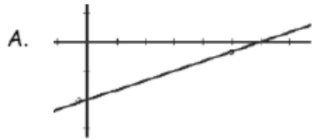
11. Use the table at right to determine the rate of change for the interval $[0, 10]$.

- A. \$1500 per week
B. -\$1200 per week

- C. \$30 per week
D. -\$30 per week

Weeks(x)	Amount owed in dollars (f(x))
0	1500
5	1350
10	1200
15	1050
20	900

12. Which of the following is **NOT** a function?



B. $\{(2, 1), (3, 6), (6, 14)\}$

C. D. $\{(2,$

x	y
1	6
7	11
7	43

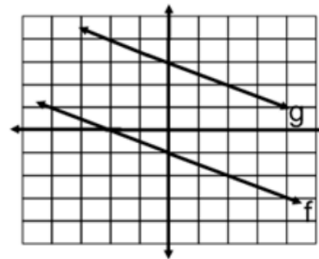
$9), (3, 3), (-2, 4)\}$

13. The recursive formula for an arithmetic sequence is given as $a_n = a_{n-1} + 6$, with $a_1 = 2$. What are the first four terms of the sequence?

2, 8, 14, 20

14. Given the graphs of $f(x)$ and $g(x)$ at right, which is the function rule for $g(x)$ in terms of $f(x)$?

$g(x) = f(x) +/ -$ +4

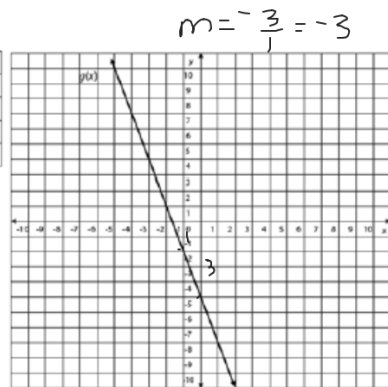


15. Describe the relationship between the functions $f(x)$ and $g(x)$?

$f(x)$ has a greater rate of change.

$$m = \frac{10 - 2}{-2 - 0} = \frac{8}{-2} = -4$$

x	$f(x)$
-2	10
0	2
2	-6
4	-14



16. The school cafeteria sells two kinds of wraps: vegetarian and chicken. The vegetarian wrap cost \$1.00 and the chicken wrap cost \$1.80. Today they made \$98.80 from the 70 wraps sold. How many of the wraps sold were chicken? Let x = # of vegetarian wraps and let y = # of chicken wraps.

$$x + y = 70$$

$$x + 1.80y = 98.8$$

$$\begin{array}{r} x + y = 70 \\ x - y = -70 \\ \hline \end{array}$$

$$.80y = 28.8$$

$$y = 36$$

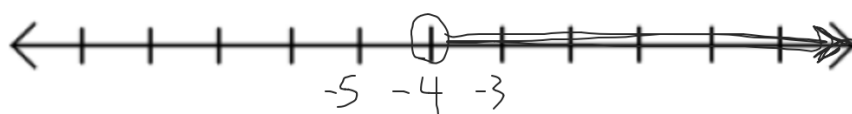
$$x + 36 = 70$$

$$x = 34$$

34 veggie wraps

36 chicken wraps

17. Graph the correct solution for the inequality $-2x + 4 < 12$?



$$\begin{array}{r} -2x + 4 < 12 \\ \underline{-4 \quad -4} \\ -2x < 8 \\ \underline{-2 \quad -2} \\ x > -4 \end{array}$$

18. Write the pair of inequalities shown in the graph?

$y = mx + b$

$y \geq \underline{\quad}x - \underline{5}$

$y \geq \underline{-}x + \underline{1}$

