

Exam Review

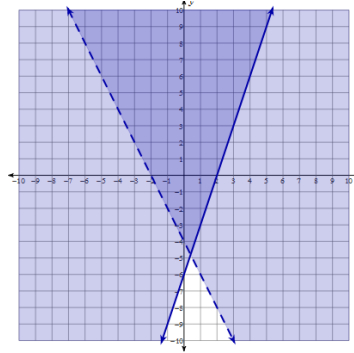
1) (System of Inequalities) Rosa is buying T-shirts and shorts. T-shirts cost \$12 and shorts cost \$20. She plans to spend no more than \$120 and buy at least 4 items. Create the system of inequalities for the situation above.

2) (System of Inequalities) In One week, Ed can mow and rake at most a total of 8 times. He charges \$20 for mowing and \$10 for raking. He needs to earn more than \$120 in one week. Create the system of inequalities for the situation above.

3) (System of Inequalities) The system of inequalities is graph below.

If the order pair (1, b) is a solution to the system of inequalities, which show the possible values for b.

- A)  $b \leq -3$       B)  $b < -3$   
 C)  $b \geq -3$       D)  $b > -3$



4) (System of Inequalities) Graph the system of inequalities.

- a)  $\begin{cases} x - 2y \leq 6 \\ x + 2y \leq -2 \end{cases}$       b)  $\begin{cases} x + y \geq -2 \\ x - 3y < -6 \end{cases}$

5) (Inverse Functions) Write the inverse function of the given equations below.

- a)  $y = \frac{x+3}{2}$       b)  $y = 2x - 5$       c)  $y = \frac{x-5}{3}$

6) (Average Rate of Change) Find the average rate of change of betty's weight in the table below.

Time(months)	0	1	2	3	4	5	6
Weight(pounds)	170	166	167	163	157	152	149

7) Average Rate of Change) James was born with a weight of 7 pounds. When he was 6 months old he was 10 pounds. At month 12 he was 16 pounds. What is the average rate of change of James's weight?

8) (Linear Functions) Scat (The squirrel from Ice Age) drops his acorn of a 2300 feet cliff. He drops off the cliff to save his acorn. He descends 30 feet per seconds. Write the function to represent the situation.

9) (Linear Functions) The function  $f(x) = 167x + 75$ , models the monthly cost,  $f$ , of the cable bill. Let  $x$  represent the number of months. What does the 167 represent in terms of the bill?

10) (Graph Linear Equations) Graph the linear equations.

- a)  $y = 3x - 7$       b)  $3x - 6y = 24$       c)  $y = \frac{1}{3}x + 4$       d)  $y = -\frac{3}{4}x + 5$

11) (Systems of Equations) Solve the system of equations.

$$a) \begin{cases} 6x + 2y = 14 \\ 4y + x = -16 \end{cases}$$

$$b) \begin{cases} 5y - x = 15 \\ -2x + 10y = 14 \end{cases}$$

$$c) \begin{cases} 6x - 7y = -5 \\ -10x - 8y = -28 \end{cases}$$

12) (Systems of Equations) At a football game concession stand, they sell hot dogs and pizza. They sold a total of 26 items. Hot dogs (h) cost \$2. Pizza (p) costs \$2.50. The total sales were \$59. How many hot dogs did they sell during the game?

13) (Systems of Equations) Megan spent \$14.85 to buy a bouquet of daisies and tulips (Mrs. Evans' favorite flower). Daisies cost \$1.25 each and tulips cost \$0.90 each. The bouquet had 13 flowers. Write the system of equations and DO NOT SOLVE.

14) (y-intercepts) Find the y-intercept.

a)

X	1	2	3	4
y	10	14	18	22

b)

X	2	3	4	5
y	-51	-47	-43	-39

15) (Linear Operations) Given the linear functions  $f(x) = 2x + 9$  and  $g(x) = 6x - 1$ . Create a new function.

A)  $j(x) = g(x) - f(x)$

b)  $k(x) = f(x) - g(x)$

16) (Explicit Rules) Write a recursive and both explicit rules for the sequence.

a) 549, 555, 561, 567...

b) 3454, 3331, 3208, ...

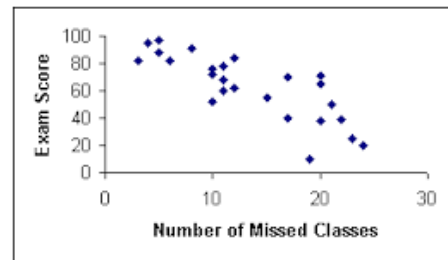
17) (Correlation)

a) Identify type of correlation.

b) Out of the choice which is likely the correlation coefficient?

$$r = 1 \quad r = -1 \quad r = 0.75 \quad r = -0.79 \quad r = -0.2$$

c) Describe the relationship between the numbers of missed classes and the exam scores.



18) (Correlation)

a) Identify type of correlation.

b) Out of the choice which is likely the correlation coefficient?

$$r = 1 \quad r = 0 \quad r = 0.6 \quad r = -0.5 \quad r = 0.1$$

c) Describe the relationship between shoe size and IQ.

