Skills Analysis Ch. 1
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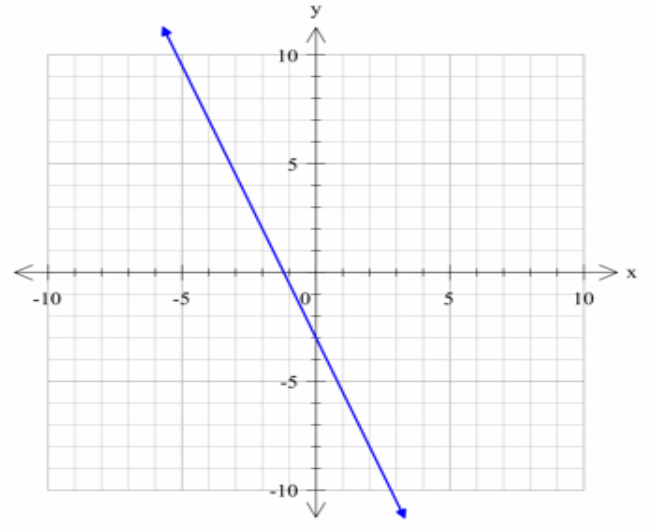
Question 1

Determine the rule of the linear function represented in the graph below.



a- $y = x - 3$

b- $y = -\frac{5}{2}x - 3$

c- $y = -3x$

d- $y = -\frac{2}{5}x - 3$

Question 2

Find the zero (x-intercept) of the following linear function.

$$y = \frac{1}{2}x - 6$$

a- $x = 3$

b- $x = 12$

c- $x = -6$

d- $x = 0$

Question 3

Solve the following system of linear equations by the **substitution method**. Use **algebra tiles** if that makes it easier for you to visualize the solution.

$$x = y - 10$$
$$x + y = -2$$

a- $(6, -4)$

b- $(-4, 6)$

c- $(4, -6)$

d- $(-6, 4)$

Question 4

Find the solution to the following system of equations using the comparison method.

$3y = 2x - 2$

$3y = -5x + 68$

a- (10, 6)

b- (10, -6)

c- (-10, 6)

d- (6, 10)

Question 5

Herbert, Lester and Arthur each brought their families to watch the Cincinnati Reds play baseball. When Herbert went to the concession stand, he bought three hamburgers and four hotdogs for $27.

If Lester paid $19 for two hamburgers and three hotdogs, how much did Arthur pay for six hotdogs?

a- $30

b- $15

c- $20

d- $18

Question 6

Find the rule of the linear function in slope-intercept form that has a slope of -5 and passes through the point $(-5, -5)$.

a- $y = -5x - 30$

b- $y = -5x - 6$

c- $y = -5x + 30$

d- $y = -5x - 5$

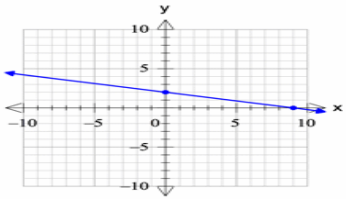
Question 7

Graph the following linear function using a table of values.

$9x - y = 2$

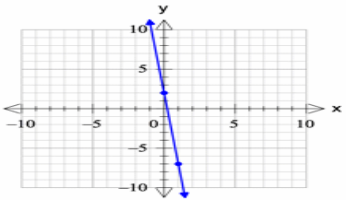
a-

x	y
0	2
9	0



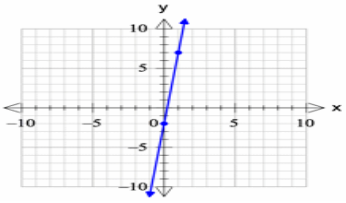
b-

x	y
0	2
1	-7



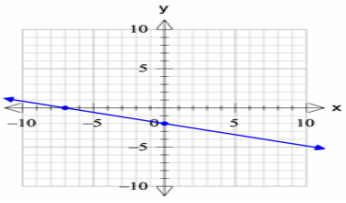
c-

x	y
0	-2
1	7



d-

x	y
0	-2
-7	0



Question 8

Garth believes that there are only two kinds of music worth listening to; country and western. He has fifteen more western songs than he has country songs on his iPod. If x represents the number of country songs on his iPod, what inequality would describe the situation where there are 75 songs or less stored on his iPod?

a- $2x + 15 > 75$

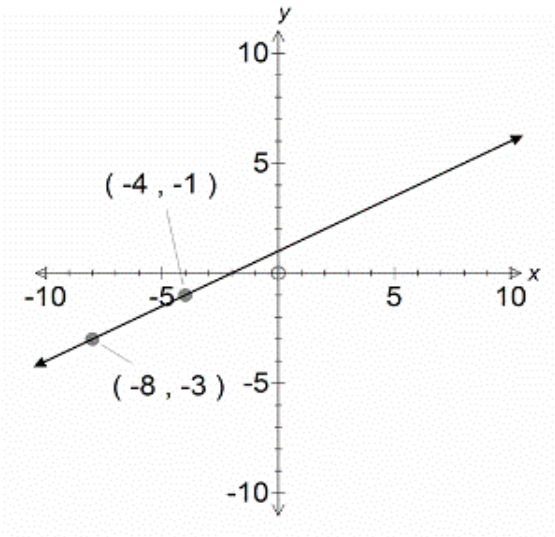
b- $2x + 15 \geq 75$

c- $2x + 15 \leq 75$

d- $2x + 15 < 75$

Question 9

Find the slope of the following function.



a- $\frac{3}{2}$

b- $\frac{3}{4}$

c- $\frac{3}{5}$

d- $\frac{1}{2}$

Question 10

Solve for x in the following inequality.

$9x-14>3x+10$

a- $x>4$

b- $x<-\frac{1}{3}$

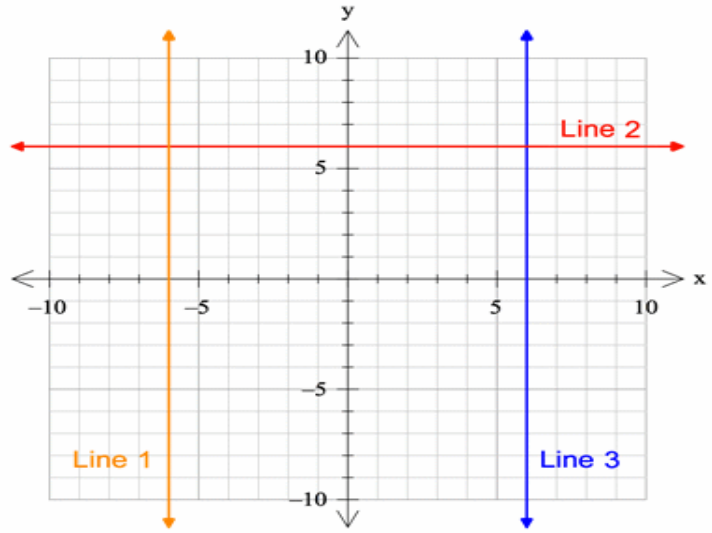
c- $x<4$

d- $x>-\frac{4}{12}$

Question 11

Indicate the region that must be shaded on the graph below in order to represent the solution set for the following inequality.

$x \geq 6$



a- Shade to the right of Line 3, including Line 3

b- Shade below Line 2, including Line 2

c- Shade to the left of Line 3, including Line 3

d- Shade above Line 2, including Line 2

Question 12

Find the solution to the following system of linear equations by using the substitution method.

$x + 8y = 12$

$3x + 2y = -8$

a- (-4, 2)

b- (2, -7)

c- (-4, -2)

d- (2, -4)

Question 13

How much will Nita pay this week for 8 kg of fish and 3 kg of beef when last week she paid $102.25 for 9 kg of fish and 5 kg of beef?

A kilogram of beef costs $2.25 more than a kilogram of fish.

a- $85.75

b- $78.25

c- $88.50

d- $81.25

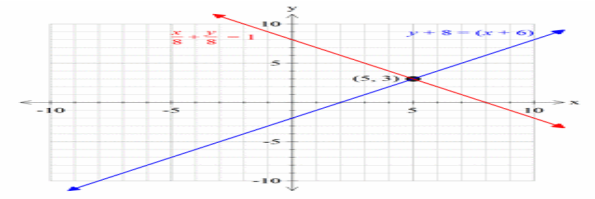
Question 14

Find the solution to the following system of linear equations by graphing.

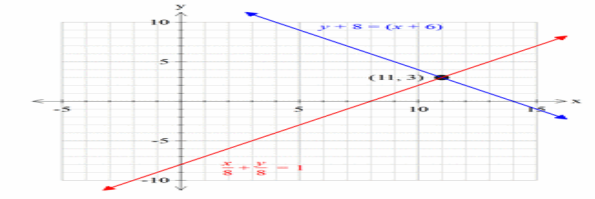
$y+8=(x+6)$

$\frac{x}{8}+\frac{y}{8}=1$

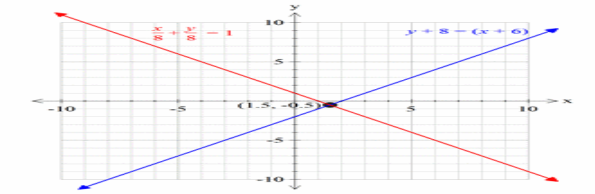
a-



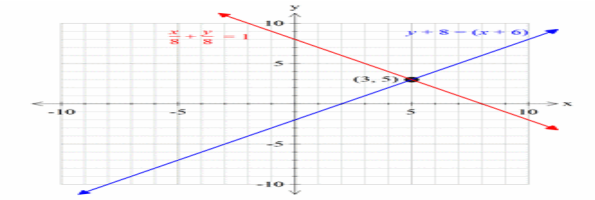
b-



c-



d-



Question 15

Solve for ***m*** in the equation given below.

$12(m-3)-3=6-3(2m-3)$

a- $m=-3$

b- $m=3$

c- $m=6$

d- $m=-6$