

Key

Math 1

3-1 Practice

Name _____

Date _____

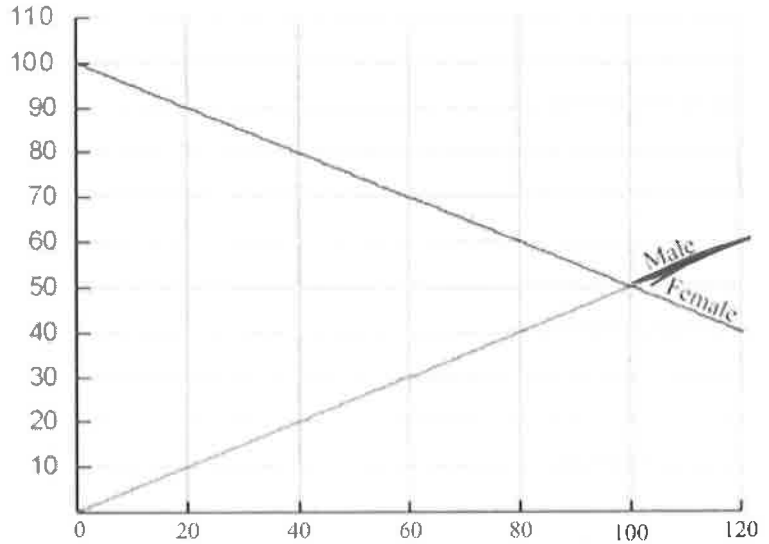
The equations below represent the percent of male and female teachers in the Mayfield District starting in the year 1950.

$x = \text{year after 1950}$

Female: $f(x) = 100 - 0.5x$

Male: $m(x) = 0.5x$

x	$f(x)$	$m(x)$
0	100	0
10	95	5
20	90	10
30	85	15
40	80	20
50	75	25
60	70	30
70	65	35
80	60	40
90	55	45
100	50	50
110	45	55



Answer the following questions using the table and graph. Then explain how you can find the answer using either the graph or the table. Also, write a sentence explaining what your answer means. I am expecting an answer and two sentences.

1. What percent of the teachers were male in the year 1975? $x=25$

12.5%. Look @ table & find # right between 10 + 15.

In 1975, the % of teachers that were male was 12.5%.

2. In what year will the percent of teachers that are female be 40%?

$x=115 \rightarrow$ Will be in the row after $x=110$,

In 2065, the % of teachers that are female will be

3. In what year will the percent of male's teachers equal the females?

2050 ($x=100$). Find intersection point on graph.

In 2050, the % of male & female doctors is the same (50%).

4. What years will the percent of male teachers be greater than females?

$x > 100$ Look when male line is higher than female.

After 2050, the % of male teachers will be higher than the % of female.

5. When will the percent of female teachers be four times larger than the male percent?

$x=40$ Look for when $f(x) = 4 \cdot m(x) \rightarrow 80 = 4 \cdot 20$

In 1990 the % of female teachers was quadruple the % of male.

Add table & graph to this page.

What questions could be answered by the following equations and inequalities? I also want you to solve them using the table and graph and explain what the answer means.

6. $100 - .5x = 70$

$x = 60$

$f(x)$ When is/was the % of female teachers 70%?

In the year 2010 

7. $M(x) = .5(30)$

$M(x) = 15$

x What was the % of male teachers in the year 1980?

The % of male teachers was 15%.

8. $100 - .5x = 2(.5x)$

$x \approx 65$

$f(x) = 2 \cdot M(x)$

When was/will the % of female teachers be double the % of male teachers?

Around the year 2015 (between 2010 + 2020).

$x < 115$

9. $60 > .5x$ Same as $0.5x < 60$
 $M(x)$

In what years was/will the % of male teachers less than 60%?

Prior to the year 2065, the % of male teachers is less than 60%.

10. $100 - .5x < 40$

$x > 115$

$f(x)$

When will the % of female teachers be less than 40%?

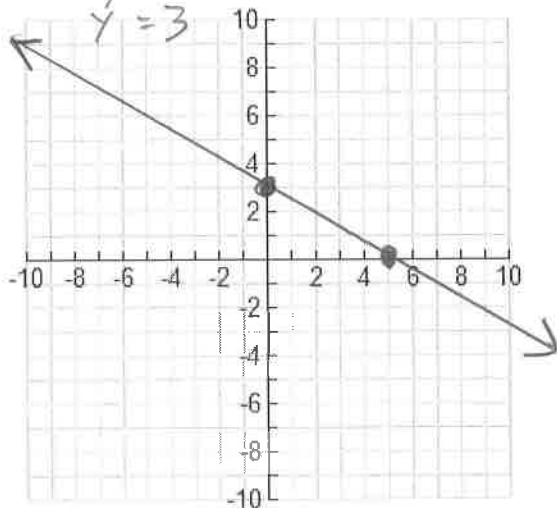
This will occur beyond (after) the year 2065.

Graph the following:

$$3x + 5y = 15$$

X-intercept: $3x + 5(0) = 15$
 $3x = 15$
 $x = 5$

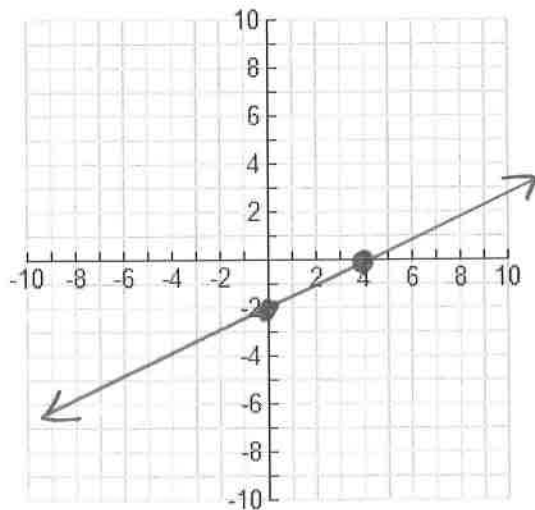
Y-int: $3(0) + 5y = 15$
 $5y = 15$
 $y = 3$



$$-2x + 4y = -8$$

X-int: $-2x = -8$
 $x = 4$

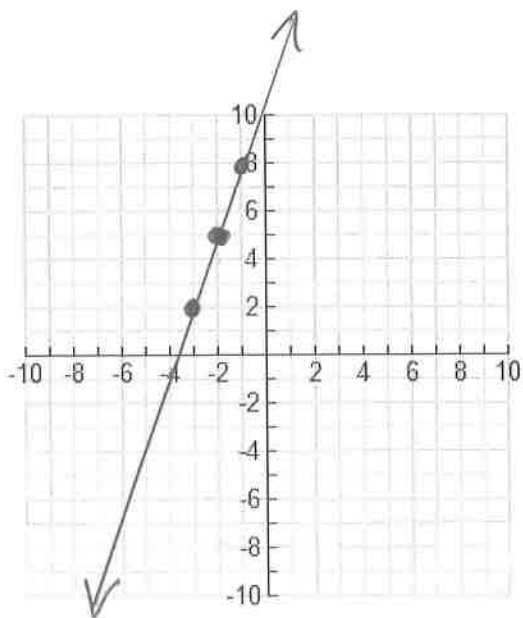
Y-int: $4y = -8$
 $y = -2$



$$y - 5 = 3(x + 2)$$

$$(-2, 5)$$

$$m = 3$$



~~...~~ $y + 4 = -\frac{7}{8}(x - 9)$

$$(9, -4)$$

$$m = -\frac{7}{8}$$

Down 7, Right 8
or
Up 7, Left 8

