

The following equations represent the percent of males and females in the armed forces since 1920.

$$y_1 = 95 - .45x$$

$$y_2 = 5 + .45x$$

Use the following graph to answer the questions 1-6 below:

1. Are males or females represented by y_1 ?

Males (Neg. slope)

2. In what year will the percent of males fall to 60%?

$$X \approx 78$$

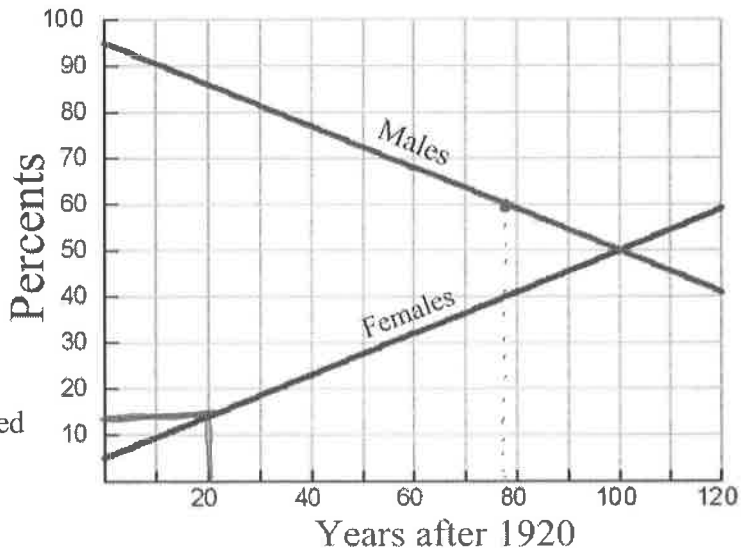
About 1998

3. What will the percent of females in the armed forces be in the year 1940?

About 13%

4. When will the percent of females in the armed forces be greater than the percent of males?

After 2020.



5. Which question below is represented by the following equation? $y_1 = 95 - .45(70)$

- a. When will the percent of females be 70%?
- b. When will the percent of males be 70%?
- c. What will be the percent of males in the year 1990?
- d. What will be the percent of females in the year 1990?
- e. What will be the percent of males in the year 1970?

6. Which question below is represented by the following equation? $28 = 5 + .45x$

- a. When will the percent of females be 28%?
- b. When will the percent of males be 28%?
- c. What will be the percent of males in the year 1948?
- d. What will be the percent of females in the year 1948?
- e. What will be the percent of males in the year 1928?

7. Using algebra, solve the following equation by hand. $20 < 12 - 2x$

- a. $x = -4$
- b. $x > -4$
- c. $x < -4$
- d. $x = -16$
- e. $x < -16$

$$\begin{aligned} 8 < -2x \\ \frac{8}{-2} & \frac{-2x}{-2} \\ -4 > x \end{aligned}$$

or

$$x < -4$$

Switch inequality sign!!