

ASSIGNMENT NO.1 CLASS X

LINEAR EQUATIONS

1. Solve the following pair of linear equations by the substitution method or by elimination method.

(i) $x + y = 14$, $x - y = 4$

(ii) $3x - y = 3$, $9x - 3y = 9$

2. Solve the following questions by cross-multiplication method

$$0.2x + 0.3y = 1.3$$

$$0.4x + 0.5y = 2.3$$

3. Solve:

$$67x + 112y = -89$$

$$112x + 67y = -269$$

4. Five years hence, the age of Jacob will be three times that of his son. \

Five years ago, Jacob's age was seven times that of his son. What are their present ages?

5. 5. A fraction becomes $\frac{9}{11}$, if 2 is added to both numerator and

denominator. If, 3 is added to the numerator and denominator, then it

becomes $\frac{5}{6}$. Find the fraction

6. Solve $2x + 3y = 11$ and $2x - 4y = -24$ and hence find the value of 'm' for which $y = mx + 3$.
7. 10 students of Class X took part in a Mathematics quiz. If the number of girls is 4 more than the number of boys, find the number of boys and girls who took part in the quiz. Form the pair of linear equations for the above problem, and find its solution graphically
8. Comparing $\frac{a_1}{a_2}$, $\frac{b_1}{b_2}$, find out if the lines representing the following pair of linear equations, are intersecting, parallel or coincident.

$$5x - 4y + 8 = 0, 7x + 6y - 9 = 0$$

9. Given the linear equation $2x + 3y - 8 = 0$, write another linear equation in two variables such that the geometrical representation of the pair so formed is:

(i) intersecting lines (ii) parallel lines (iii) coincident lines