



CLASS X

SAMPLE PAPER

MATHS

LINEAR EQUATIONS IN TWO VARIABLES

Name:.....

Time: 1 hrs

F.M: 50

1. Find the value of m and n for which following system of linear equations have infinitely many solutions

$$3x+4y=12$$

$$(m+n) x+2(m-n)y=(5m-1)$$

2. Solve for x and y
 $ax+by- a+b=0$ and $bx-ay-a-b=0$
3. Solve for x and y : $23x-29y=98$ and $29x-23y=110$
4. Solve for x and y :

$$\frac{15}{x-y} + \frac{22}{x+y} = 5, \frac{40}{x-y} + \frac{55}{x+y} = 15$$

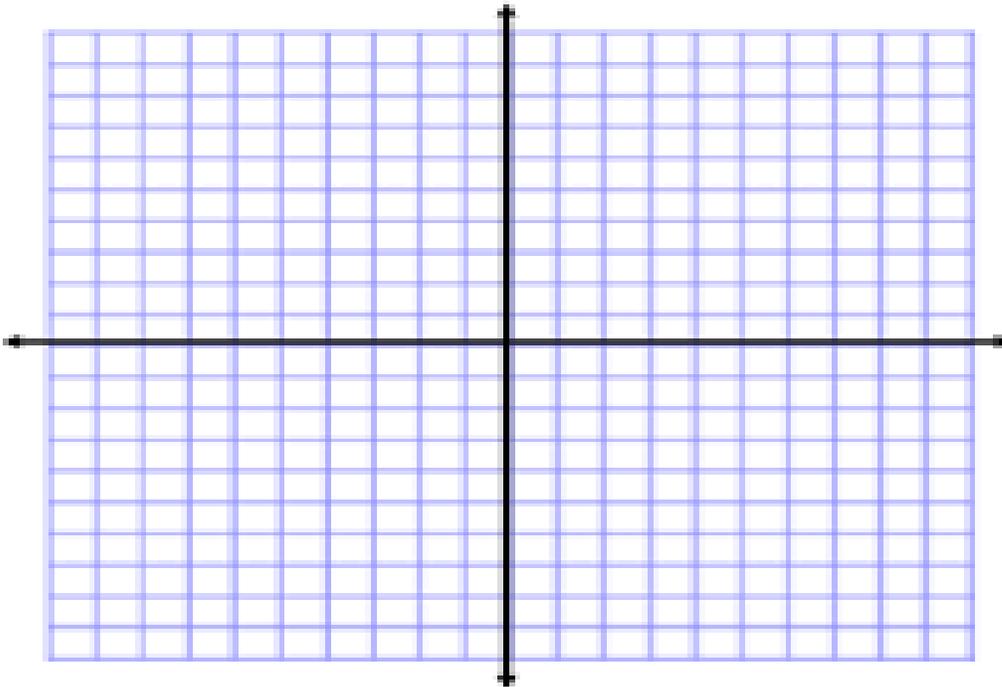
5 .Solve for x and y:

$$(a-b)x+(a+b)y=a^2-2ab-b^2 \quad \text{and} \quad (a+b)(x+y)=a^2+b^2$$

6. Solve the following system of equation graphically

$4x-5y+16=0$, $2x+y-6=0$. Determine the vertices of triangle formed by lines and x axis

Coordinate Plane



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7. 8 men and 12 boys can finish a work in 5 days, while 6 men and 8 boys can finish it in 7 days. Find the time taken by 1 man and 1 boy alone to finish the same work.

8. A boat goes 16km upstream and 24km downstream in 6 hours. Also it covers 12km upstream and 36km downstream in the same time. Find the speed of the boat in still water and that of the stream
9. A sum of two numbers is 1000 and difference between their squares is 256000. Find the numbers.
10. A two digit number is such that the product of its digit is 14. If 45 is added to the number, the digits interchange their places. Find the number.



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