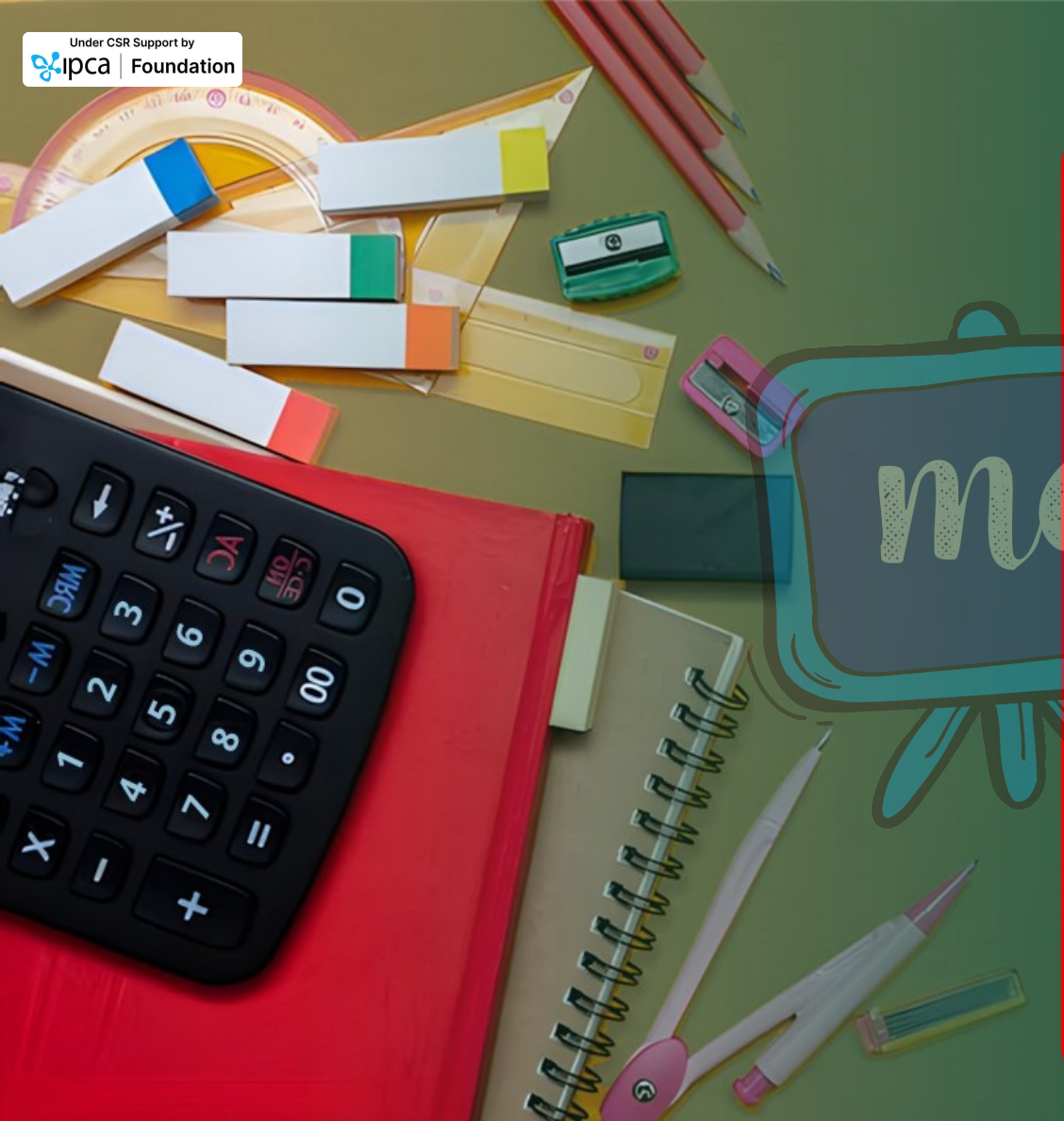


CLASS – 10

MATHEMATICS

CH – 3
Pair of Linear Equations in two Variables

CBSE Board

Previous Year Questions – 1

Shubham Tiwari

1. The pair of linear equations

$2x = 5y + 6$ and $15y = 6x - 18$

represents two lines which are

(CBSE 2023)

A. intersecting

B. parallel

C. coincident

D. either intersecting or parallel

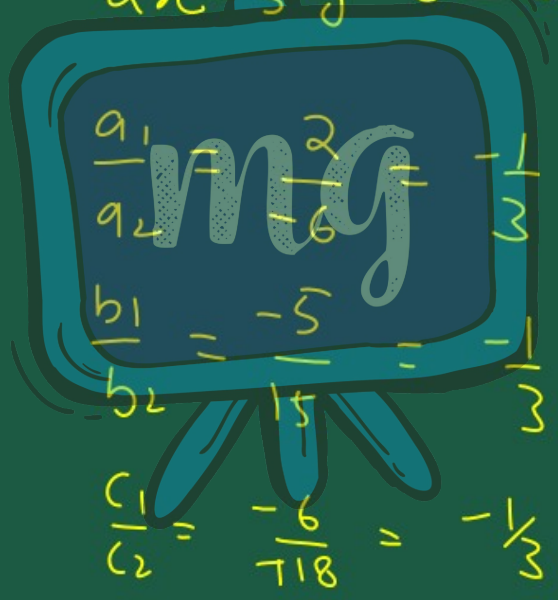
$\frac{a_1}{a_2} \neq \frac{b_1}{b_2}$

$\frac{a_1}{a_2} = \frac{b_1}{b_2} \neq \frac{c_1}{c_2}$

$\frac{a_1}{a_2} = \frac{b_1}{b_2} = \frac{c_1}{c_2}$

$2x = 5y + 6$ | $15y = 6x - 18$

$2x - 5y - 6 = 0$ | $-6x + 15y + 18 = 0$



$\frac{a_1}{a_2} = \frac{2}{-6} = -\frac{1}{3}$

$\frac{b_1}{b_2} = \frac{-5}{15} = -\frac{1}{3}$

$\frac{c_1}{c_2} = \frac{-6}{+18} = -\frac{1}{3}$

2. The pair of linear equations $\frac{3x}{2} + \frac{5y}{3} = 7$ and $9x + 10y = 14$ is

(CBSE 2020)

A. consistent

B. inconsistent

C. consistent with one solution

D. consistent with many solutions

$\frac{3x}{2} + \frac{5y}{3} = 7$

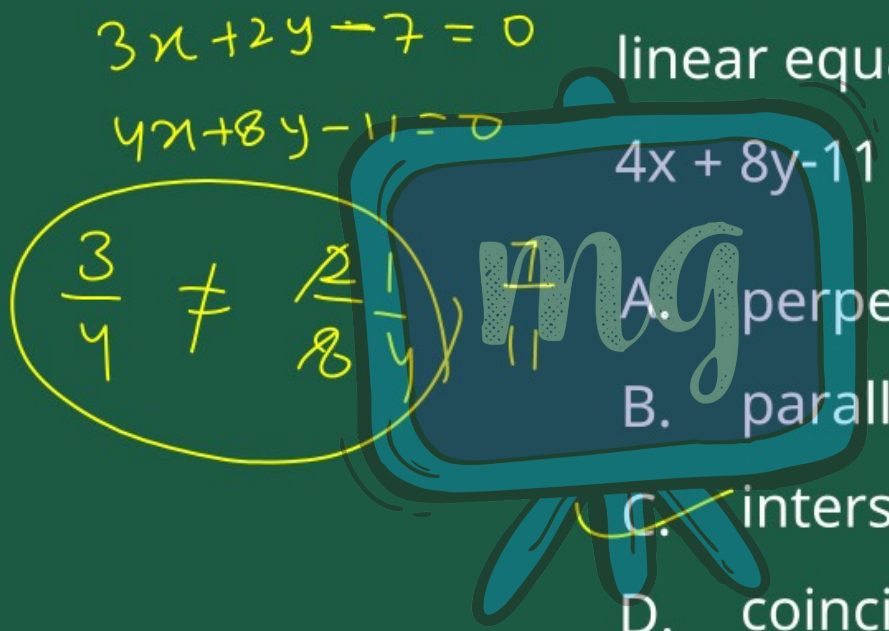
$9x + 10y = 42$

$9x + 10y = 14$

$\frac{9}{9} = 1 = \frac{10}{10} = 1$

$\frac{42}{14} = 3$

3. The pair of lines represented by the linear equations 3x + 2y = 7 and 4x + 8y-11 = 0 are (CBSE Term I, 2022)



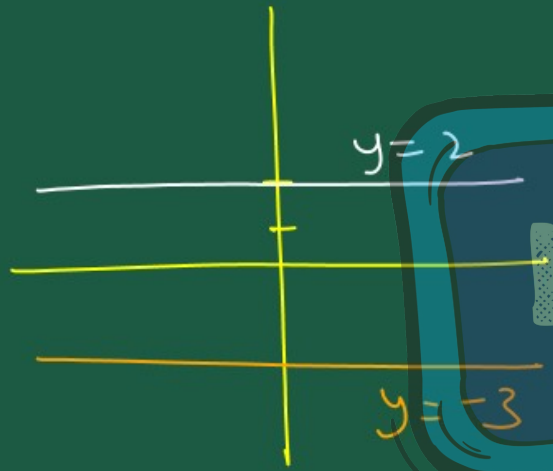
A. perpendicular

B. parallel

C. intersecting

D. coincident

4. The pair of equations y = 2 and y = – 3 has (CBSE Term I, 2022)



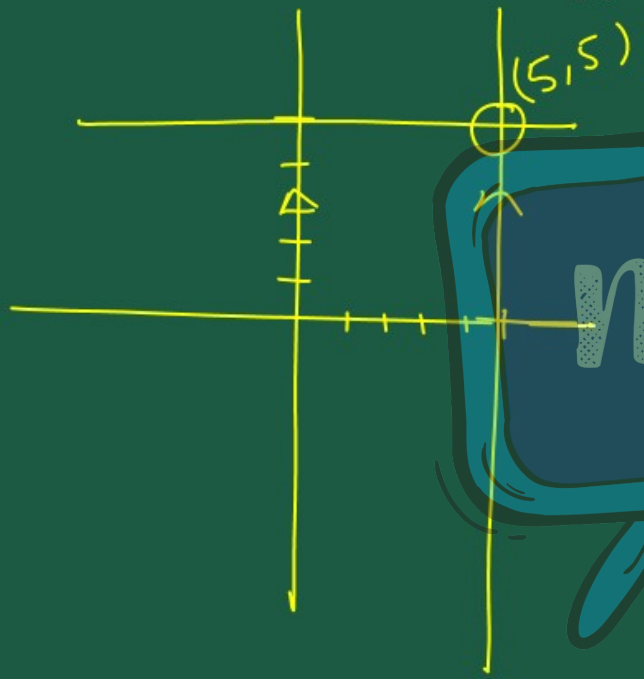
A. one solution

B. two solutions

C. infinitely many solutions

D. no solution

5. The pair of equations x = 5 and y = 5 has (CBSE 2020)



A. no solution

B. unique solution

C. many solutions

D. only solution (0, 0)

6. The pair of equations x = a and y = b graphically represent lines which are

(CBSE 2020)

$x = a$

$y = b$

A. Intersecting at (a, b)

B. Intersecting at (b, a)

C. Coincident

D. Parallel

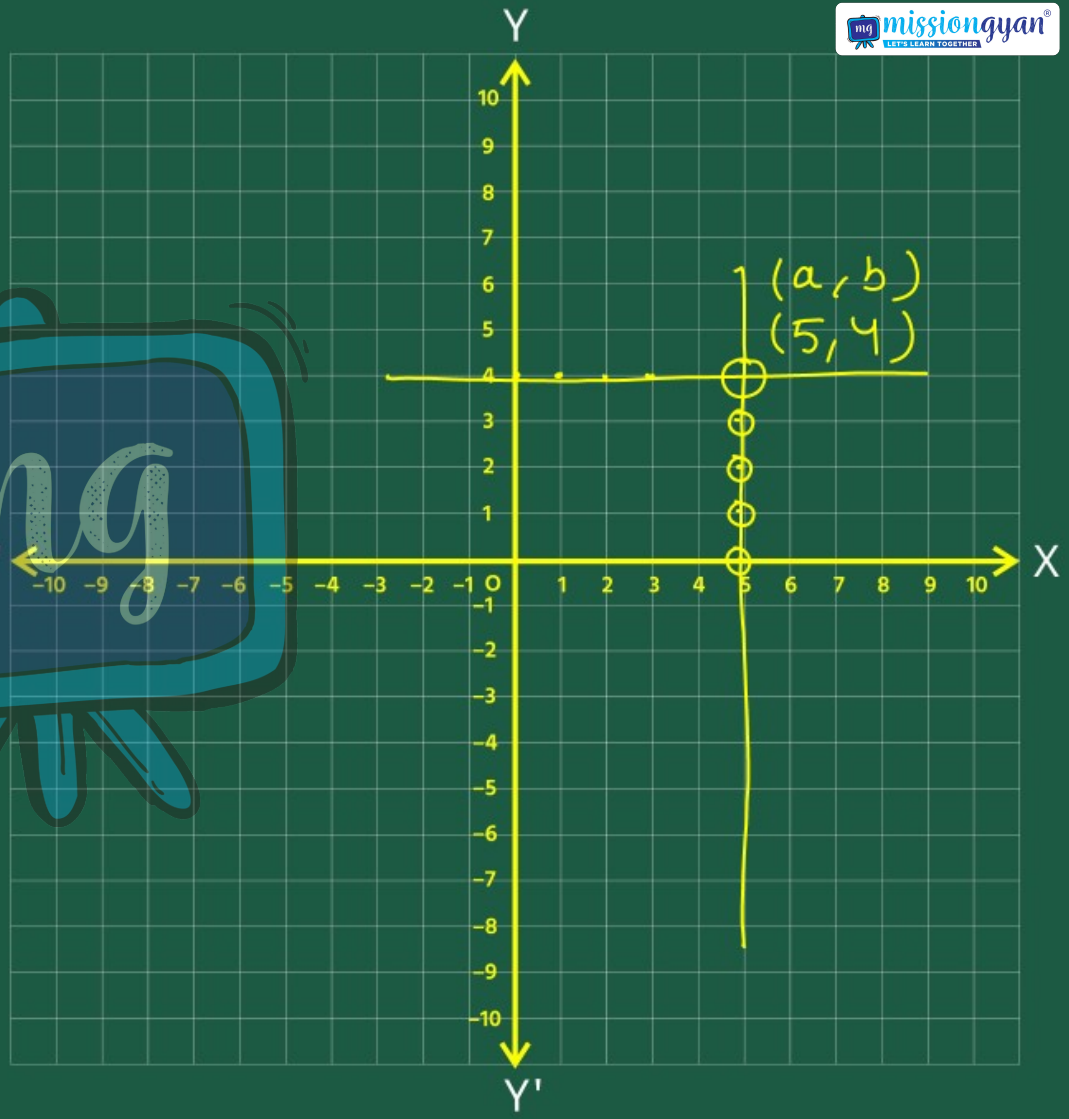
✓ $x = 5$

$x + 0 = 5$

$x + 0y = 5$

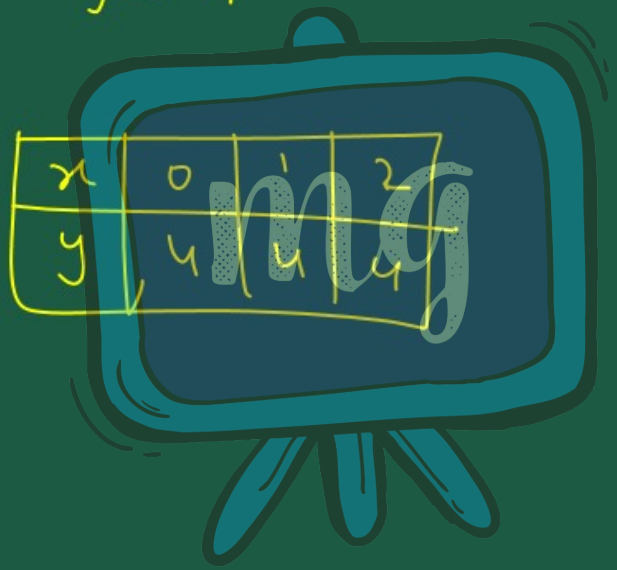
$x = 5 - (0)y$

x	5	5	5
y	0	1	2



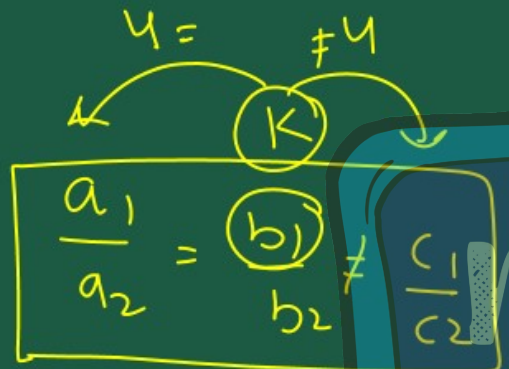
$y = b$

$y = 4$



7. The value of k for which the pair of equations kx = y + 2 and 6x = 2y + 3 has infinitely many solutions.

(CBSE 2023)



A. is k = 3

B. doesn't exist

C. is k = –3

D. is k = 4

$Kx = y + 2$

$Kx - y - 2 = 0$

$a_1 = K, \; b_1 = -1, \; c_1 = -2$

$6x = 2y + 3$

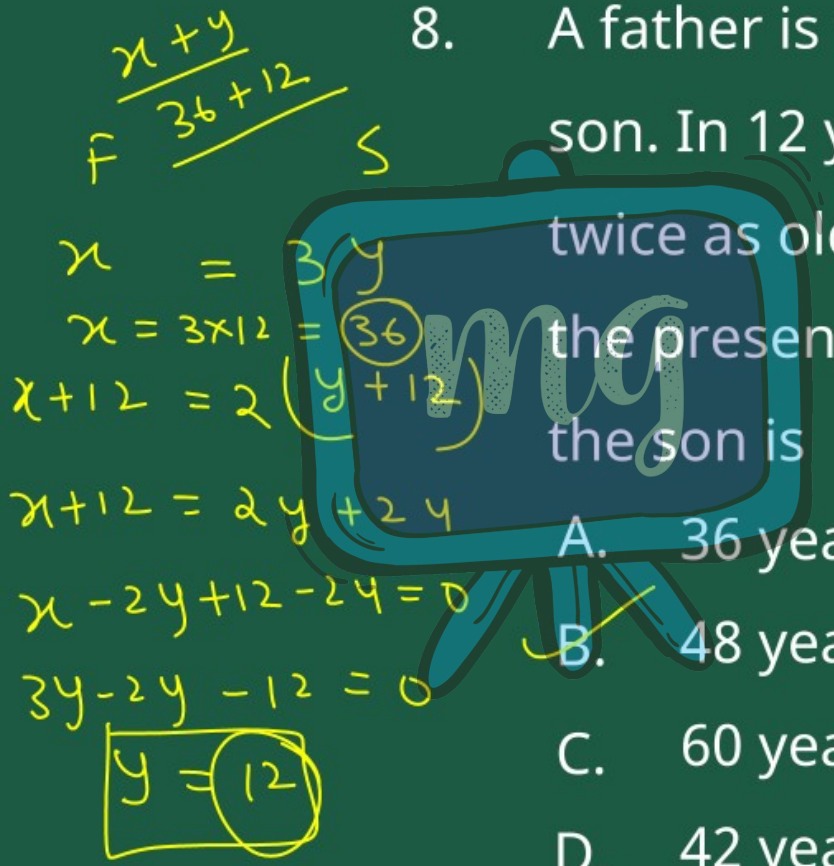
$6x - 2y - 3 = 0$

$a_2 = b_1$

$b_2 = -2, \; c_2 = -3$

$$\frac{a_1}{a_2} = \frac{b_1}{b_2} = \frac{c_1}{c_2}$$

$$\frac{K}{6} = \frac{-1}{-2} = \frac{-2}{-3}$$



8. A father is three times as old as his son. In 12 years time, he will be twice as old as his son. The sum of the present ages of the father and the son is (CBSE 2023)

A. 36 years

B. 48 years

C. 60 years

D. 42 years

9. If 17x – 19y = 53 and 19x – 17y = 55 then the value (x + y) is

(CBSE Term I, 2022)

$17x - 19y = 53$

$19x - 17y = 55$

$- \quad + \quad -$

$-2x - 2y = -2$

$-2[x + y] = -2$

$x + y = 1$

A. 1

B. –1

C. 3

D. –3

10. The value of k for which the system of equations x + y – 4 = 0 and 2x + ky = 3 has no solution, is

(CBSE Term I, 2022)

A. –2

B. ≠2

C. 3

D. 2

$x + y - 4 = 0$

$2x + ky - 3 = 0$

$\frac{1}{2} = \frac{1}{k} \neq \frac{4}{3}$

$k = 2$

$\frac{1}{2} \neq \frac{4}{3}$

$\frac{a_1}{a_2} = \frac{b_1}{b_2} \neq \frac{c_1}{c_2}$

11. Solve the pair of equations x = 5 and y = 7 graphically. (CBSE 2023)

$x = 5$

$x + 0y = 5$

$x = 5 - 0y$

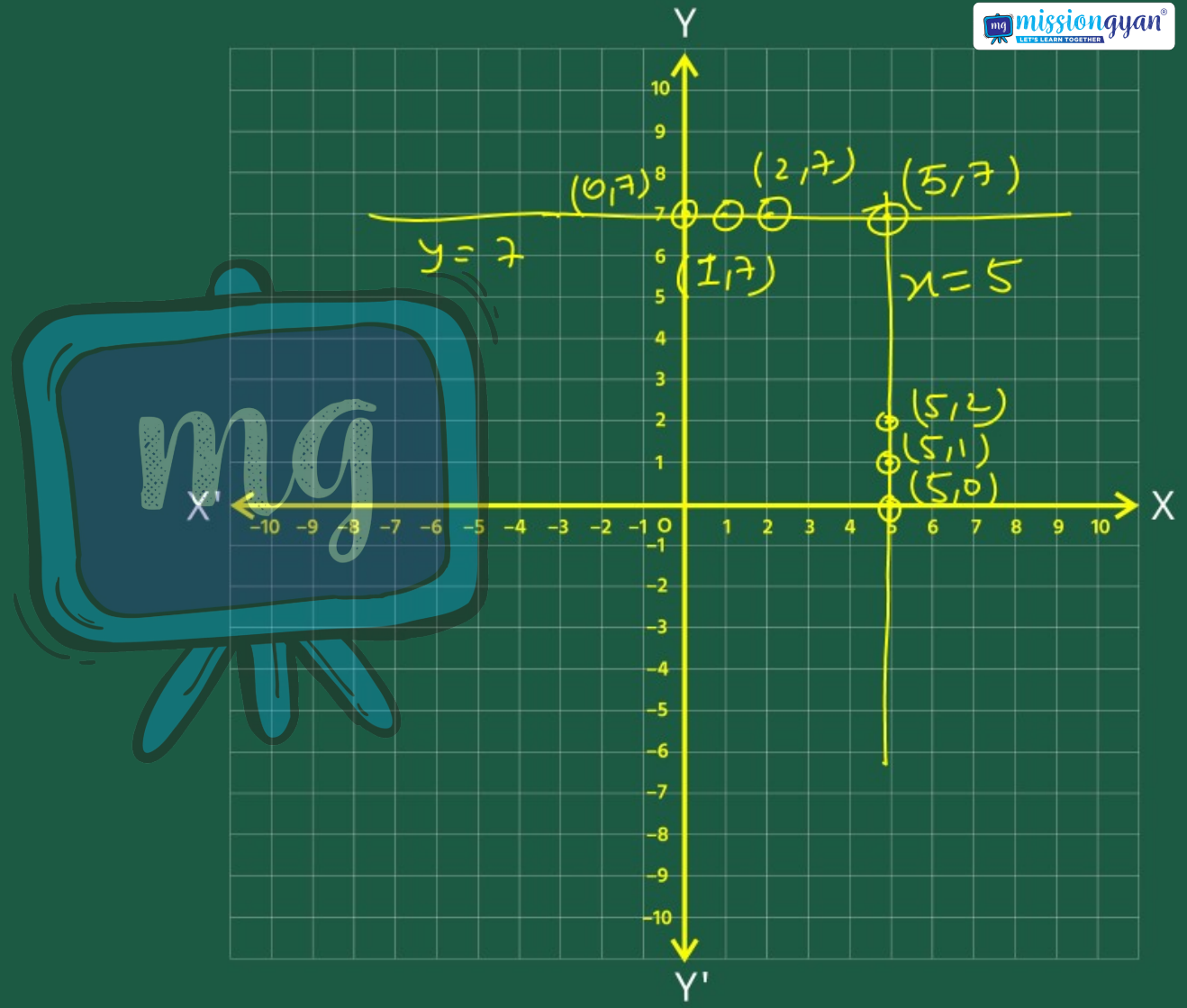
x	5	5	5
y	0	1	2

$y = 7$

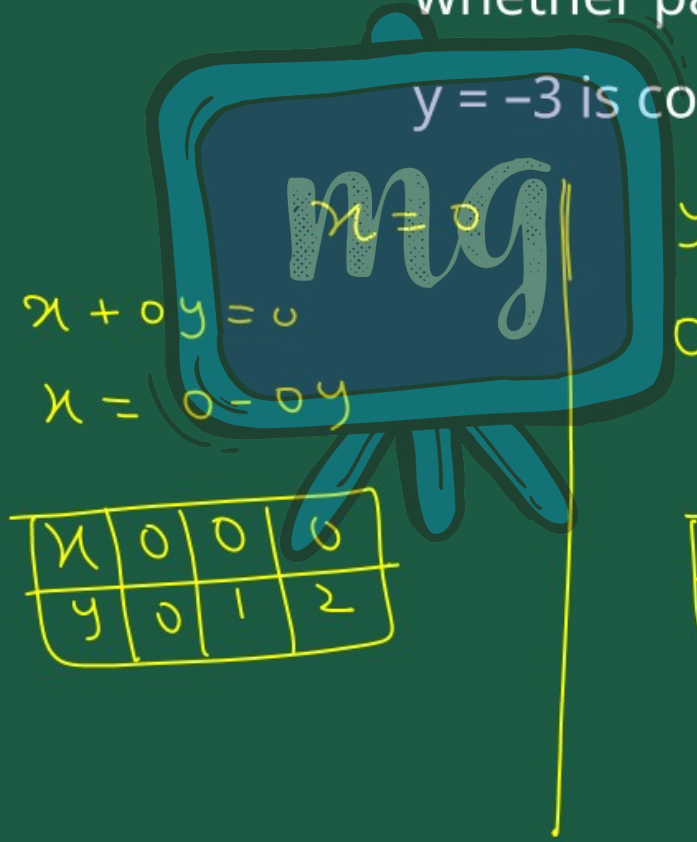
$0x + y = 7$

x	0	1	2
y	7	7	7

Hence the solution of the given equation is $x = 5, y = 7$

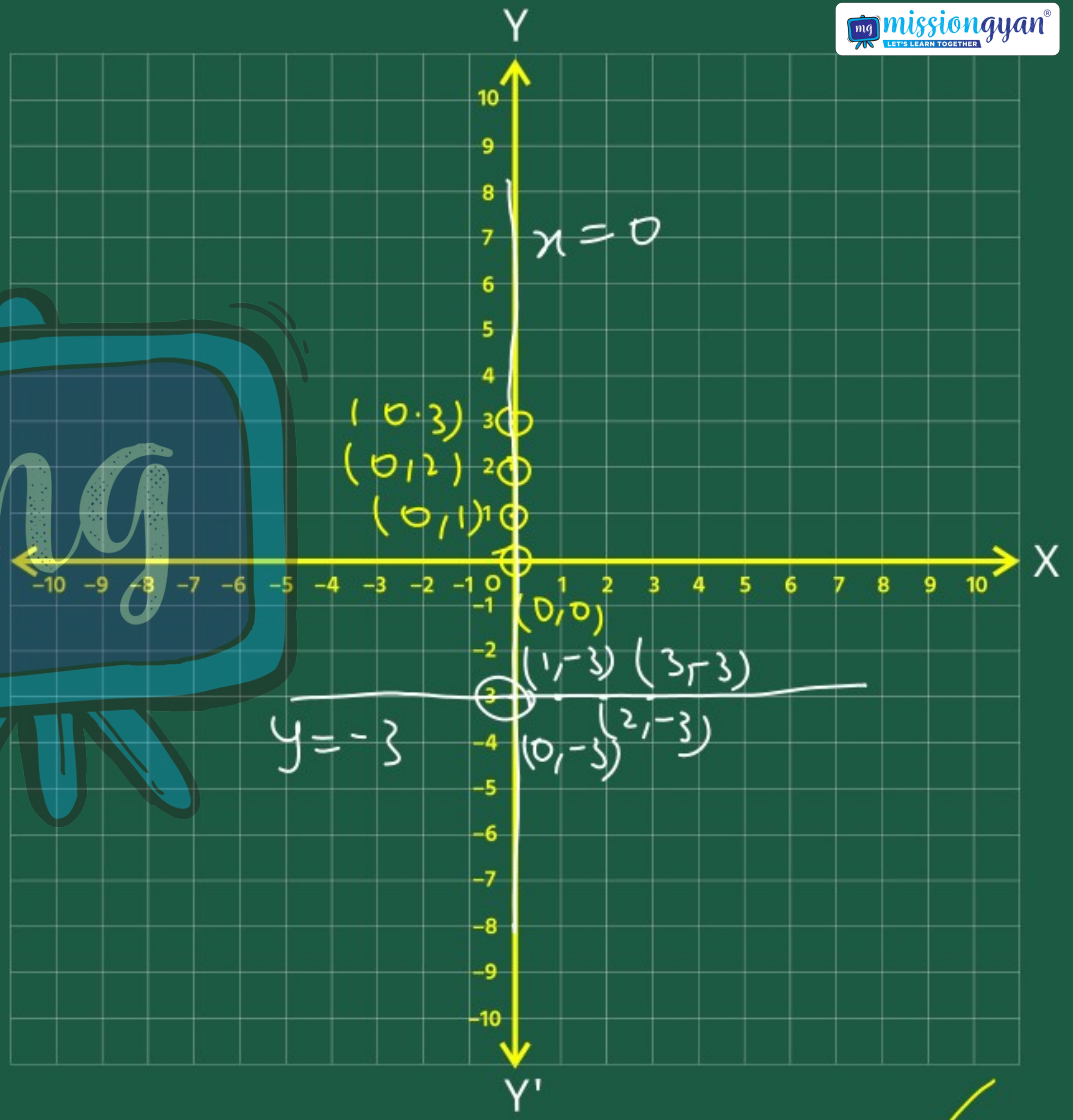


12. Using graphical method, find whether pair of equations x = 0 and y = –3 is consistent or not. (CBSE 2023)



They are intersecting at $(0,-3)$

Hence The equations are consistent



13. Determine graphically the coordinates of the vertices of a triangle, the equations of whose sides are given by 2y – x = 8, 5y – x = 14 and y – 2x = 1 (CBSE 2020)

$2y - x = 8$

$2(2) - (-4) = 8$

$4 + 4 = 8$

$8 = 8$

Solu.:

$2y - x = 8$

$2y - 8 = x$

x	0	2	4
y	4	5	6

$5y - x = 14$

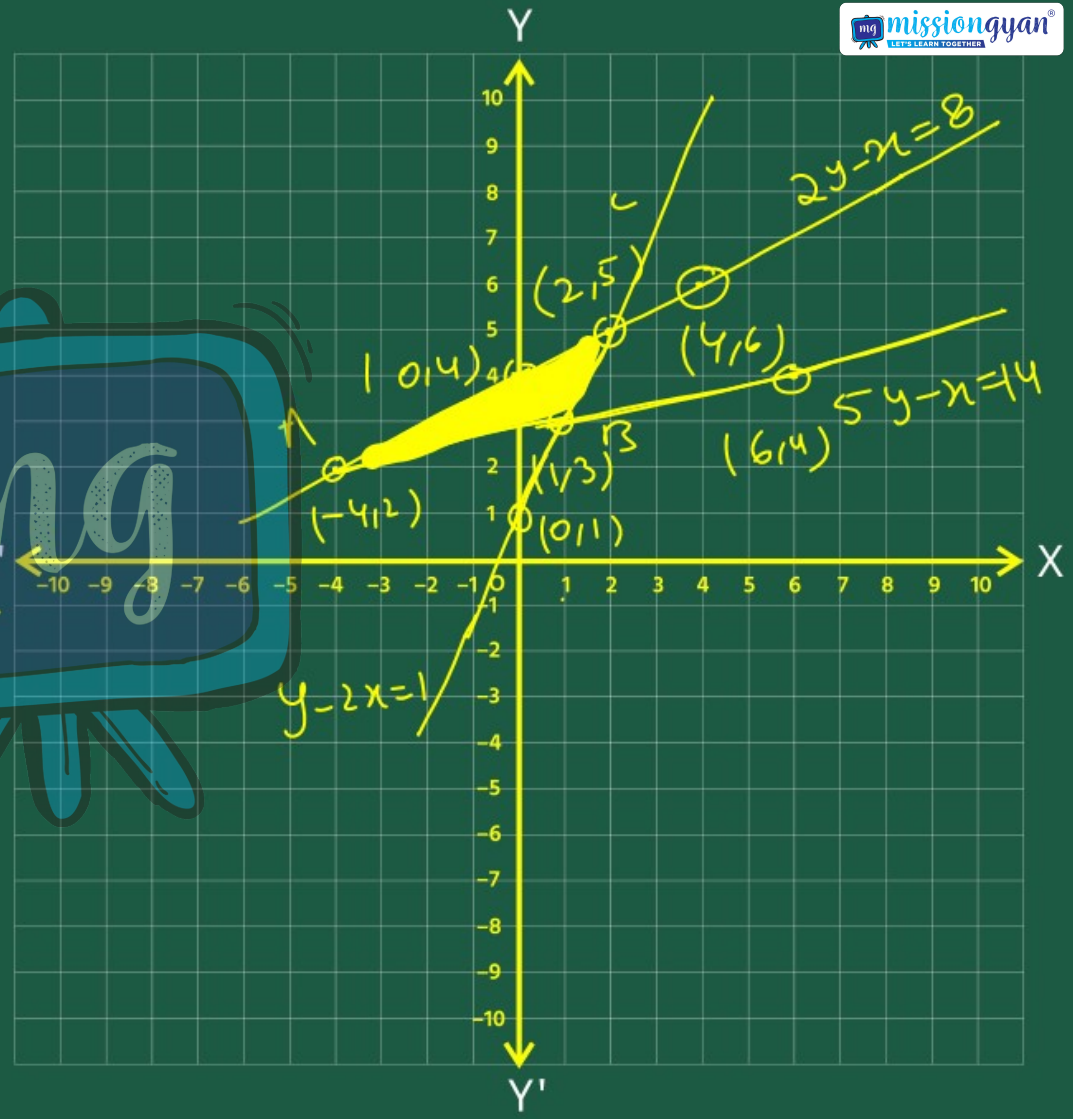
$5y - 14 = x$

x	1	6	-4
y	3	4	2

$y - 2x = 1$

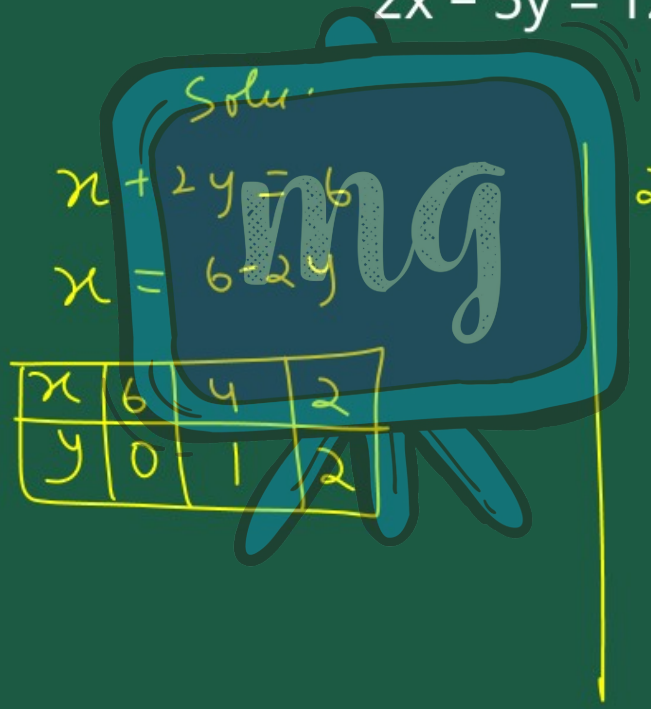
$y = 1 + 2x$

x	0	1	2
y	1	3	5



A (-4, 2), B(1, 3), C(2, 5)

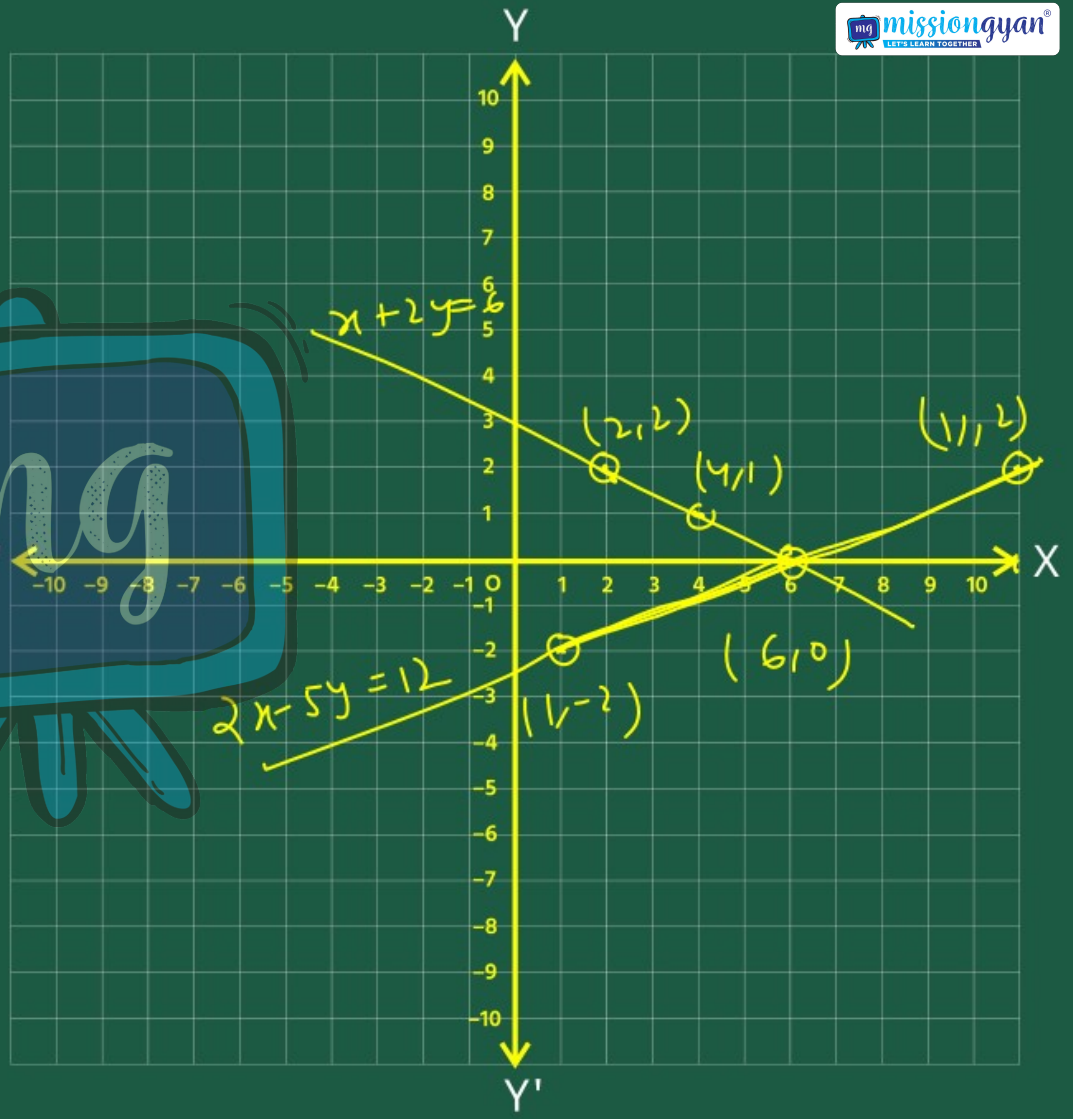
14. Solve the equations x + 2y = 6 and 2x – 5y = 12 graphically. (CBSE 2020)



x	6	4	2
y	0	1	2

x	6	11	1
y	0	2	-2

Hence the equation are intersecting at (6,0), therefore the required soln. is $x = 6, y = 0$



15. Draw the graph of the equations $x - y + 1 = 0$ and $3x + 2y - 12 = 0$. Using this graph, find the values of x and y which satisfy both the equations. (CBSE 2019)

$x - y + 1 = 0$

$x + 1 = y$

x	0	1	2
y	1	2	3

Sol: $3x + 2y - 12 = 0$

$2y = 12 - 3x$

$y = \frac{12 - 3x}{2}$

x	0	2	4
y	6	3	0

The lines are intersecting at (2,3), therefore the required solution is

$x = 2,\ y = 3$