

LINEAR EQUATIONS IN 2 VARIABLES. (10th)

CHAPTER-3

Multiple choice Questions.

(PULKIT JARAL)

- Q1. The lines $x = -2$ and $y = 4$ are \rightarrow
 (a) parallel lines (b) intersecting lines (c) overlapping (d) None of these
- Q2. The lines $x = a$ & $y = b$ are \rightarrow
 (a) parallel lines (b) intersecting lines (c) overlapping lines (d) None of these
- Q3. The lines $x = 0$ & $x = -a$ are \rightarrow
 (a) parallel lines (b) intersecting lines (c) overlapping lines (d) None of these.
- Q4. The pair of linear equations $x = -5$ and $y = 2$ graphically represent the lines which are (a) parallel (b) intersecting at $(-5, 2)$ (c) coincident (d) intersecting at $(2, -5)$ (e) None of these.
- Q5. Dependent lines are also known as \rightarrow (a) coincident lines (b) parallel. (c) intersecting lines (d) None of these
- Q6. The pair of linear equations $y = 2$ & $y = 4$ has.
 (a) one solution (b) two solutions (c) as many solutions (d) no solution
- Q7. When two lines are coincident, then the graphical solution system of linear equations have (a) as no. of solutions (b) unique solution (c) no solution (d) two solutions.
- Q8. The pair of linear equations $2x - 7y = 10$ & $6x - 30 = 21y$ will have
 (a) no solution (b) as no. of solutions. (c) exactly 1 solution (d) None
- Q9. If pair of equations is inconsistent in nature then lines will be.
 (a) Always intersecting lines (b) Always parallel lines. (c) Always dependent (d) It may be intersecting or coincident.
- Q10. If pair of equations is consistent then lines will be.
 (a) intersecting (b) coincident (c) parallel (d) either (a) or (b) options.
- Q11. The pair of equations $4y = 18 - 3x$ & $\frac{16y}{3} = 24 - 4x$ has \rightarrow
 (a) as no. of solutions (b) unique solution (c) no solution.

Q12. The pair of linear equations $\frac{x}{3} + \frac{y}{2} = 3$ & $x = 2 + 2y$ has —

- (a) Unique solution (b) No solution (c) ∞ many solutions (d) Can't say

Q13. The pair of linear equations $y = \frac{76 - 20x}{60}$ and $5x + 15y = 19$ has —

- (a) Unique solution (b) No solution (c) ∞ many solutions (d) Can't say.

Q14. The pair of linear equations $5x + 10y = -25$ & $-15x = 30y - 5$ will have

- (a) ∞ no. of solutions. (b) Unique solution (c) No solution (d) None of these

Q15. The value of 'K' for which the system of equation has. $x - 3 = 2y$ & $3x - 1 = -ky$ has a unique solution. (a) $K \neq -6$ (b) $K = -6$ (c) $K \neq 6$ (d) None.

Q16. Check the consistency of the given system of equation. $x + 2y = -1$ & $5x + 10y = 2$

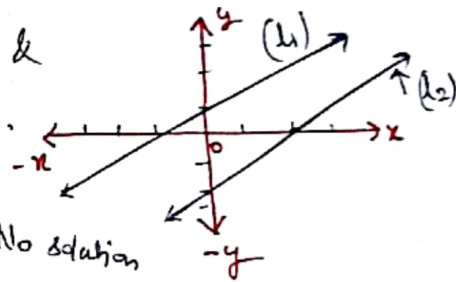
- (a) Consistent (b) Inconsistent (c) Both (a) & (b) option (d) None

Q17. Check the consistency of the given equations $2x - 10 = 7y$ & $21y = -30 + 6x$

- (a) Consistent (b) Inconsistent (c) Both (a) & (b) option (d) None

Q18. From the graph of given equations. $l_1 = a_1x + b_1y + c_1$ &

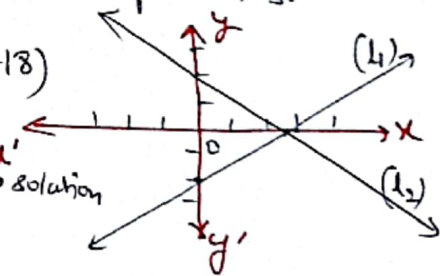
$l_2 = a_2x + b_2y + c_2$. Determine the consistency & nature of both the equations.



- (a) Consistent, ∞ no. of solutions. (c) Inconsistent, No solution
(b) Consistent, No solution (d) Inconsistent ∞ no. of solutions.

Q19. From the graph of the given equations (same as above Q18)

Determine the consistency and nature.



- (a) Consistent, exactly one solution. (c) Inconsistent, No solution
(b) Consistent ∞ no. of solutions (d) None.

Q20. If $a_1x + b_1y + c_1 = 0$ & $a_2x + b_2y + c_2 = 0$ are 2 equations. then which relations condition shows the "No solution".

- (a) $\frac{a_1}{a_2} \neq \frac{b_1}{b_2}$ (b) $\frac{a_1}{a_2} = \frac{b_1}{b_2} = \frac{c_1}{c_2}$ (c) $\frac{a_1}{a_2} \neq \frac{b_1}{b_2} \neq \frac{c_1}{c_2}$ (d) $\frac{a_1}{a_2} = \frac{b_1}{b_2} \neq \frac{c_1}{c_2}$

Q21. The value of 'K' for which the system of equation $x + 2y = 3$ & $5x + Ky + 7 = 0$ has No solution. (a) $K = \frac{-14}{3}$ (b) $K = \frac{14}{3}$ (c) $K = 10$ (d) None

Q22. find the value for which the system of equation $3x = -5y$ & $Kx + 10y = 0$ has a non-zero solution. (a) $K = \frac{2}{3}$ (b) $K = \frac{3}{2}$ (c) $K = 6$ (d) $K \neq 6$

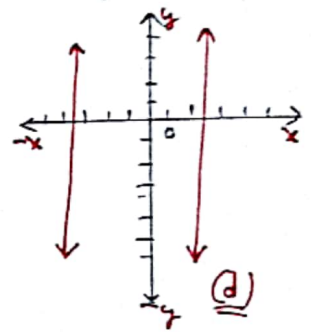
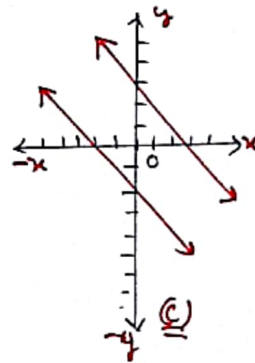
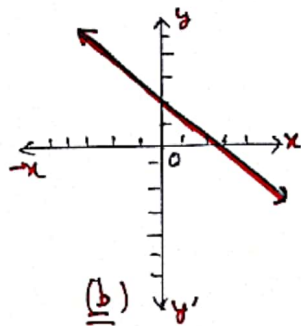
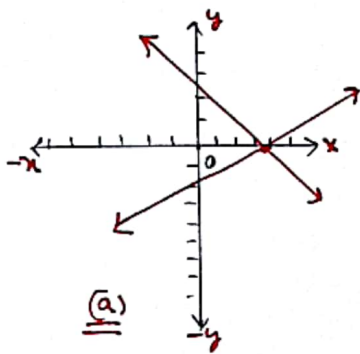
Q23. The value of 'K' for which the equations $Kx = y + 2$ & $6x - 2y - 3 = 0$ will have infinite (∞) many solutions (a) $K = 3$ (b) $K = -3$ (c) $K = 2$ (d) No possible value of K

Q24. If the pair of equations $2x + 3y - 7 = 0$ & $Kx = 12 - \frac{9}{2}y$ have "No solution" then value of K is (a) -3 (b) 3 (c) $-\frac{7}{12}$ (d) None

Q25. If the pair of equations. $3x + 2y = 13$ & $3x - 2y = 5$ represents two intersecting lines then what are the coordinates of point of intersection. (a) $(2, 3)$ (b) $(3, 2)$ (c) $(-2, -3)$ (d) Cannot determine.

Q26. If the pair of equation $3y = 5 - 2x$ & $\frac{15}{2}y - c = -5x$ represents 2 coincident lines, then the value of c is → (a) -5 (b) $\frac{25}{2}$ (c) $-\frac{25}{2}$

Q27. Which graph is drawn suitable for given system of equation. $x + 3y = 6$ & $2x - 3y = 12$



Q28. For what value of 'm' the given system of equation $mx = 3 - 3y$ & $12x + my = 6$ has No solution. (a) $m = 6$ (b) $m = -6$ (c) $m \neq -6$ (d) None of these

Q29. For what value of 'K' the given system of equation $(K-3)x = K-3y$ & $Kx = 12 - Ky$ has infinitely (∞) many solutions (a) $K = -6$ (b) $K = 6$ (c) $K = 3$ (d) None

Q30. For what value of 'K' the given system of equation $Kx - K + 3 = -3y$ & $12x = K - Ky$ has a Unique solution (a) $K \neq 6$ (b) $K \neq -6$ (c) Both (a) & (b)

Q31. For what value of 'K' the given system of equation $(2K-1)x = (2K-1) - (K-1)y$ & $3x + y = 1$ has No solution. (a) $K = 2$ (b) $K \neq 2$ (c) $K = 3$ (d) None

Q32. For what value of 'K' for which the equations $4x - 5y = K$ & $2x - 3y = 0$ will have Unique solution. (a) $K = -20$ (b) $K = 20$ (c) $K = 24$ (d) $K = \text{any real value.}$

Q33. For what value of 'K' the given system of equation $(3K+1)x + 3y - 2 = 0$
 $(K^2+1)x + (K-2)y - 5 = 0$ has No solution. (a) $K = -1$ (b) $K = 1$ (c) $K = 0$

Q34. The values of m and n for which the following system of equation has.
 a infinite (∞) no. of solutions. $(2m-1)x + 3y = 5$ & $3x + (n-1)y = 2$
(a) $m = \frac{11}{5}$, $n = \frac{17}{4}$ (b) $m = \frac{17}{4}$, $n = \frac{11}{5}$ (c) $m = \frac{17}{4}$, $n = \frac{11}{4}$ (d) None

Q35. The value of 'K' for which given system of equations $K(x-2) + 3y = 1$ &
 $2(K+1)x + 3y = (7K+1)$ has (∞) many solution (a) $K = 2$ (b) $K = -3$ (c) $K = 0$

Q36. The value of 'K' for which the lines $5x = 3 - 7y$ & $15x = K - 21y$ will
 coincide each other. (a) $K = 18$ (b) $K = 9$ (c) $K = 17$ (d) None

Q37. one equation of a pair of dependent linear equations. is $-5x + 7y = 2$.
 The second equation can be

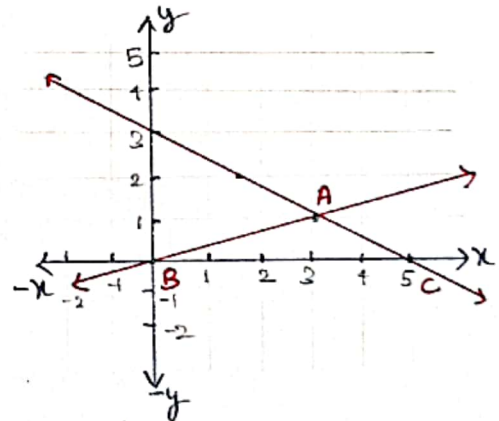
(a) $15x + 21y = 6$ (b) $15x - 21y = -6$ (c) $-15x + 21y = -6$ (d) None

Q38. One equation of a pair of dependent linear equation is $4x + y = 7$ then
 other equation is (a) $20x + 5y = 30$ (b) $20x + 5y = 35$ (c) $20x + y = 35$

Q39. The pair of linear equation $3x + 5y = 3$ & $6x + Ky = 8$ do not have
 a solution if. (a) $K = 5$ (b) $K = 10$ (c) $K \neq 10$ (d) $K \neq 5$

Q40. So from the given graph the coordinates
 of vertices of ΔABC formed by the 2
 lines and x axis is

(a) $A(1,3), B(0,0), C(5,0)$ (c) $(1,3), (9,0), (5,0)$
(b) $(3,1), (0,0), (0,5)$ (d) None of these



Q41. The solution of the equation $0.4x + 0.3y = 1.7$ & $0.7x - 0.2y = 0.8$
(a) $x = 2, y = -3$ (b) $x = 3, y = 2$ (c) $x = -3, y = -2$ (d) None

Q42. The solution of the system of linear equations. $\frac{x}{a} + \frac{y}{b} = a + b$ & $\frac{x}{a^2} + \frac{y}{b^2} = 2$
(a) $x = a$ & $y = b$ (b) $x = a^2$ & $y = b^2$ (c) $x = 1$ & $y = 1$ (d) $x = y = 0$

Q43. The solution of the equations. $2(ax - by) + (a + 4b) = 0$ & $2(bx + ay) + (b - 4a) = 0$
(a) $x = a, y = b$ (b) $x = -1, y = -1$ (c) $x = y = 1$ (d) $x = \frac{1}{2}, y = 2$

Q44. The solution of the equations $\frac{11}{m+n} = 2$ & $m-n = \frac{9}{10}$ is \rightarrow

- (a) ~~m=0, n=0~~ (b) m=3.2, n=2.3 (c) m=3, n=2 (d) None.

Q45. If $\sqrt{a}x - \sqrt{b}y = b-a$ & $\sqrt{b}x = \sqrt{a}y$ then $\frac{x}{y}$ is \rightarrow

- (a) $\sqrt{\frac{b}{a}}$ (b) $\sqrt{\frac{a}{b}}$ (c) $-\sqrt{\frac{a}{b}}$ (d) $-\sqrt{\frac{b}{a}}$

Q46. If $\sqrt{m}x = \sqrt{n}y$ & $(\sqrt{m})y = n-m + (\sqrt{n})x$ then find $(xy) = ??$

- (a) -mn (b) mn (c) $-\sqrt{mn}$ (d) \sqrt{mn}

Q47. If $31x + 43y = 117$ & $43x + 31y = 105$ then (x/y) is

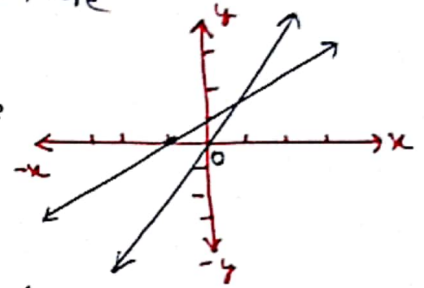
- (a) -1 (b) 2 (c) $-\frac{1}{2}$ (d) $\frac{1}{2}$ (e) None of these

Q48. If $19x - 17y = 55$ and $17x - 19y = 53$ then solution is

- (a) (-1, 2) (b) (2, -1) (c) (2, -1) (d) None of these

Q49. From the graph shown, the number of solutions of is

- ~~the~~ (a) Exactly one solution (b) 2 solutions
(c) 3 solutions (d) No solution



Q50. The graph of the given pair of equations $3x + y - 9 = 0$ & $y = -3x - 7$ represent.

- (a) Intersecting lines (b) Dependent lines (c) Parallel lines (d) None of these

Q51. Which of the following pair of equations is Dependent equations.

- (a) $2x + y = 15$
 $4x + y = 30$ (b) $x + y = 10$
 $5x + 5y = 50$ (c) $2x + 3y = 1$
 $12x + 18y = 1$ (d) None of them.

Q52. How many solutions does the pair of equations have $y = -2x + 4$ and $14x + 7y = 28$

- (a) One solution (b) 2 solution (c) No solution (d) Infinite solutions.

Q53. How many solutions does equations $y = -2x - 4$ & $y = 3x + 3$ have??

- (a) Only 1 solution (b) 2 solutions (c) No solution (d) ∞ solution.

Q54. The graph of the equations $x=0$ & $x+y=4$ represents \rightarrow

- (a) Intersecting lines (b) parallel lines (c) Coincident lines (d) None

Q55. How many solutions. does the equations. $y = 1 - 5x$ & $-5x = y - 1$ have

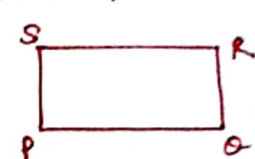
- (a) One solution (b) 2 solution (c) No solution (d) None of these

Q56. The value of 'k' for which the lines $5x = 3 - 7y$ & $2y = k - 15x$ coincides.
 (a) 5 (b) 7 (c) 18 (d) 9

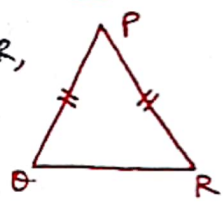
Q57. The number of solutions of equations $3^{x+y} = 243$ & $(243)^{x-y} = 3$.
 (a) one solution (b) 2 solutions (c) No solution (d) ∞ many solutions

Q58. The solution of the equations. $3^{x+y} = 9$ and $(81)^{x-y} = 3$ is \rightarrow
 (a) $x=1, y=2$ (b) $x=\frac{11}{8}, y=\frac{5}{8}$ (c) $x=\frac{5}{8}, y=\frac{11}{8}$ (d) None of these

Q59. The solution of the equation $2^{a+b} = 16$ & $(4)^{a-b} = 2$ are \rightarrow
 (a) $a=\frac{7}{4}, b=\frac{9}{4}$ (b) $a=\frac{-7}{4}, b=\frac{9}{4}$ (c) $a=\frac{9}{4}, b=\frac{7}{4}$ (d) None of these

Q60. PQRS is a rectangle in which $SR = (x+y)$ cm, $PO = 12$ cm, $PS = (x-y)$ cm & $RO = 8$ cm. find the values of x & y.

 (a) $x=10, y=2$ (b) $y=10, x=2$ (c) $x=-10, y=-2$ (d) Can't determine

Q61. Consider a rectangle ABCD in which $AB = (4x+3y)$ cm, $DC = 2$ cm, $BC = 3$ cm and $AD = (x+2y)$ cm. find the values of x & y.
 (a) $x=1, y=-2$ (b) $x=-1, y=-2$ (c) $x=1, y=2$ (d) $x=-1, y=2$

Q62. Figure shows the isosceles ΔPOR with $PO = OR$, equal sides. Given that $PO = (2x+3y)$ cm & $RP = 8$ cm and $OR = (x+y-1)$ cm. If perimeter of ΔPOR is given by equation $(3x+4y-9)$ then value of x is \rightarrow

 (a) 49 (b) 34 (c) 0 (d) None of these

Q63. If the system of equations $2x+3y=7$ & $2ax + \frac{(a+b)}{2}y = 28$ has infinite many solution, then which relation is correct for a & b.
 (a) $a=2b$ (b) $a=b/2$ (c) $b=4a$ (d) $b=2a$

Q64. The pair of equations $a_1x+b_1y+c_1=0$ & $a_2x+b_2y+c_2=0$ is said to be inconsistent if.
 (a) $\frac{a_1}{a_2} \neq \frac{b_1}{b_2}$ (b) $\frac{a_1}{a_2} \neq \frac{c_1}{c_2}$ (c) $\frac{a_1}{a_2} = \frac{b_1}{b_2} \neq \frac{c_1}{c_2}$ (d) Either Both (a) & (c)

Q65. A pair of linear equation is not consistent if \rightarrow
 (a) Graph is intersects (b) Graph is Coincides. (c) Graph is parallel.
 (d) Both (a) & (b)

Q66. The pair of equations $y=9$ & $y+7=0$ has —

- (a) one solution (b) 2 solutions (c) (∞) many solutions (d) No solution.

Q67. For what value of K , the pair of equations $3x+2y=4$ & $Kx=3+2y$ has a unique solution (a) All real values (b) $K=-\frac{3}{2}$ (c) $K=\frac{3}{2}$ (d) $K=2/3$ except $-3/2$

Q68. Find $(x+y)$ if $148x+231y=527$ & $231x+148y=610$.

- (a) 3 (b) 6 (c) -3 (d) None of these

Q69. If $x=34-5y$ & $x=-6+5y$ find the value of $2x-7y=??$

- (a) 28 (b) 5 (c) -28 (d) None of these

Q70. The equations of lines are $-x=-2-2y$ & $\frac{x}{2}=1+\frac{1}{4}y$ are —

- (a) Coincident in nature (b) Intersecting (c) Parallel (d) None of these

Q71. The graph of the equation $y=-5x$ is a line —

- (a) passes through origin (b) parallel to x-axis (c) perpendicular to y-axis (d) None

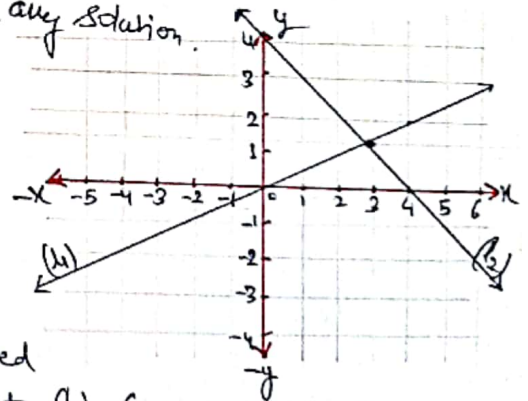
Q72. The cost of 5 chocolates and 3 biscuits is ₹ 35 & the cost of 2 chocolates & 4 biscuits is ₹ 28. Then cost of one ^(Biscuits) ~~apple~~ is — (a) 10 (b) 4 (c) 5 (d) 12

Q73. The cost of 2 pencils & 3 erasers is ₹ 9. & the cost of 4 pencils & 6 erasers is ₹ 18. Then cost of one pencil is — (a) 5 (b) 10

- (c) 15 (d) Cost of pencil & eraser could be any solution.

Q74. In this graph the area of Δ formed by the lines L_1 and L_2 and y-axis is.

- (a) 2 sq. unit (b) 6 sq. unit (c) 8 sq. unit (d) None



Q75. In the above question's graph area of Δ formed by the lines L_1 & L_2 and x-axis is (a) 2 sq. unit (b) 6 sq. unit (c) 8 sq. unit

Q76. Which one of the following statement is wrong.

(a) There are infinite linear equations can be made with x and y having values $x=1$ & $y=2$.

(b) Graphically the pair of equations $6x-3y+10=0$ & $2x-y+9=0$. Represent 2 lines which are parallel in nature.

(c) The pair of equations $y=0$ & $y=-7$ has No solution.

(d) If 2 lines overlaps each other then ~~the~~ pair of equations has No solution.