

# Pair of Linear Equations in Two Variables

### Question 1.

Find the dimensions of a garden, whose length is 4 m more than its width and half the perimeter is 36 m.

- (a)  $20 \text{ m} \times 16 \text{ m}$
- (b)  $14 \text{ m} \times 10 \text{ m}$
- (c)  $26 \text{ m} \times 22 \text{ m}$
- (d)  $12 \text{ m} \times 8 \text{ m}$

Answer: (a)  $20 \text{ m} \times 16 \text{ m}$ 

l = b + 4

1 + b = 36

1 = 20 and, b = 6

### Question 2.

The sides of a triangle are AB, BC and AC whose equations are respectively y-2=0; y=3x-7 and 2y+x=0, The coordinates of points A and B are :

- (a) A(3,2), B(-4,2)
- (b) A(-4,2), B(3,2)
- (c) A(3,2), B(2,-1)
- (d) A(-4,2), B(2,-1)

Answer: (b) A(-4,2), B(3,2)

Equation of line AB: y - 2 = 0 Equation of line BC:  $y = 3 \times -7$  Equation of line AC: 2y + x = 0 Coordinates of point B can be obtained by solving AB and BC => (3,2).

Coordinate of point A are (-4, 2)

A (-4,2) and B(3,2)

### Question 3.

Given is the system of Inconsistent equations, 2x + 7y = 11 and 5x + ky - 25 = 0, find k.

- $(a) \frac{35}{2}$
- (b) 4

(c) 
$$\frac{35}{2}$$

$$(d) - 4$$

Answer: (c) 
$$\frac{35}{2}$$
  
 $\frac{a1}{a2} = \frac{b1}{b2} \neq \frac{c1}{c2}$   
 $\frac{2}{5} = \frac{7}{k}$   
 $2k = 35$ 

$$\frac{a^2}{\frac{2}{5}} = \frac{7}{1}$$

$$2k = 35$$

$$k = \frac{35}{2}$$

#### Question 4.

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 who took part in the quiz.

- (a) 3
- (b) 7
- (c) 2
- (d) 8

Answer: (a) 3

No. of boys = x

and No. of girls = y

$$x + y = 10$$

$$y = x + 4$$

$$x = 3$$

$$y = 7$$

=> Number of boys =3

# Question 5.

5 pencils and 7 pens together cost Rs. 50 whereas 7 pencils and 5 pens cost Rs. 46. Find the cost of 2 pencils and 3 pens.

- (a) Rs. 42
- (b) Rs. 39
- (c) Rs. 21
- (d) Rs. 16

Answer: (c) Rs. 21

Let, cost of 1 pencil = x and cost of 1 pen = y - 2

Cost of 2 pencil and 3 pens = 6 + 15 = Rs. 21

=> Correct option is (c)

#### Question 6.

A linear equation in two variables has:

- (a) 1 solution
- (b) 2 solutions
- (c) no solution
- (d) infinitely many

Answer: (d) infinitely many

A linear equation in two variables has infinite number of solutions.

=> Correct option is (d)

#### Question 7.

A pair of linear equations is not consistent if:

- (a) if has one solution
- (b) it has many solutions
- (c) graph intersect or coincide
- (d) graph is parallel

Answer: (d) graph is parallel 37. Correct option is (d)

### Question 8.

In a AABC,  $\angle A = x^{\circ}$ ,  $\angle B = (3a - 2)^{\circ}$  and  $\angle C = y^{\circ}$ . Also,  $\angle C - \angle B = 9^{\circ}$ . Find the value of  $\angle B$ .

- (a) 73°
- (b) 82°
- (c)  $25^{\circ}$
- (d) 49°

Answer: (a) 73°

$$\angle A + \angle B + \angle C = 180^{\circ}$$

$$=> x + (3x - 2) + y = 180$$

$$4x + y = 182 ...(1)$$

$$y - 3x + 2 = 9 \dots (2)$$

Solving (1) & (2), 
$$y = 82$$
,  $x = 25^{\circ} = > \angle B = 73^{\circ}$ 

# Question 9.

The perimeter of a rectangle is 44 cm. Its length exceeds twice its breadth by 4 cm. Find the area of the rectangle.

- (a) 46 cm<sup>2</sup>
- (b) 49 cm<sup>2</sup>

- (c) 96 cm<sup>2</sup>
- (d) 69 cm<sup>2</sup>

Answer: (c) 96 cm<sup>2</sup>

Let, Length = x cm

Breadth = y cm

$$=> 2(x + y) = 44$$

$$=> x + y = 221, y = 6 \text{ cm}, x = 16 \text{ cm}$$

$$x = 2y + 4$$

$$=>$$
 Area = 16 x 6 = 96 cm<sup>2</sup>

#### Question 10.

For what value of k, will the equations, x + 2y + (11 - k) = 0 and 2x + ky + (10 + k) = 0 represent the coincident lines:

- (a) k = 12
- (b) k = 4
- (c) k = 36
- (d) k = 2

Answer: (b) k = 4

$$\frac{a1}{a2} = \frac{b1}{b2} = \frac{c1}{c2}$$

$$\frac{1}{a2} = \frac{2}{a2} = \frac{11-k}{a2}$$

$$k = 4$$

# Question 11.

An equation ax + by + c = 0 is a linear equation in 2 variables, where a, b, c are :

- (a) natural numbers
- (b) whole numbers
- (c) integers
- (d) real numbers

Answer: (d) real numbers

#### Question 12.

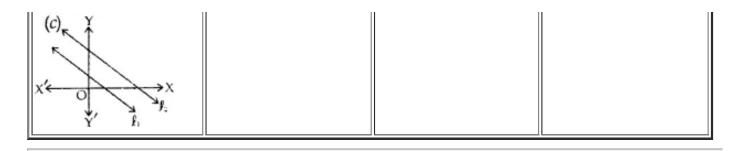
Read the following graphs carefully, and match the following:

Lines do not intersect	Unique solutions	Consistent with many
		solutions

(3) $(3)$ $(4)$ $(4)$ $(5)$ $(4)$ $(5)$ $(6)$ $(7)$			
	Lines intersect at 1 point	Infinite solutions	Consistent
$X \leftarrow O$ $Y$	Lines are coincident	No solutions	Parallel lines

### Answer:

(a) Y A A X	Lines intersect at 1 point	Unique solutions	Consistent
(b) Y	Lines are coincident	Infinite solutions	Consistent with many solutions
	Lines do not intersect	No solutions	Parallel lines



### Question 13.

The pair of equations y = 9 and y = -7 has:

- (a) one solution
- (b) two solutions
- (c) infinitely many
- (d) no solution solutions

Answer: (d) no solution solutions

y = 9 and y = -7 are lines parallel to X-axis, thus these are parallel lines and hence no solution

### Question 14.

The system of equations 3x - 5y = 20 and 6x - 10y = 40 has :

- (a) one solution
- (b) exactly 2 solutions
- (c) infinitely many solutions
- (d) no solutions solutions

Answer: (c) infinitely many solutions  $\frac{a_1}{a_2} = \frac{b_1}{b_2} = \frac{c_1}{c_2} = \frac{x}{y}$ 

$$\frac{a1}{a2} = \frac{b1}{b2} = \frac{c1}{c2} = \frac{x}{y}$$

# Question 15.

For what value of a, the pair of equations, 3x + 2y - 4 = 0 and ax - y - 3 = 0 has a unique solutions

- (a) All real numbers except  $-\frac{3}{2}$
- (b)  $a=-\frac{3}{2}$ (c)  $a=\frac{3}{2}$ (d)  $a=\frac{2}{3}$

Answer: (a) All real numbers except  $-\frac{3}{2}$ 

For unique solutions,  $\frac{a1}{a2} \neq \frac{b1}{b2}$ 

$$a \neq -\frac{3}{2}$$

a can all possible values except  $-\frac{3}{2}$ 

#### Question 16.

The sum of a two digit number is 8. The number obtained by reversing the digits exceeds the number by 18. Then the given number is :

- (a) 53
- (b) 35
- (c) 26
- (d) 62

Answer: (b) 35

Let, the digit at units' place = x and digit at ten's place =  $y \Rightarrow x + y = 8$  and lOx + y = 18 + (10y + x)

No. = 35.

#### Question 17.

In a triangle, the sum of two angles is equal to the third angle. If the difference between two angles is  $30^{\circ}$ , find the angles.

- (a)  $15^{\circ}$ ,  $45^{\circ}$ ,  $75^{\circ}$
- (b) 20°, 50°, 80°
- (c) 30°, 60°, 90°
- (d) 45°, 45°, 90°

Answer: (c) 30°, 60°, 90°

$$(x) + (y) + (x + y) 180^{\circ}$$

$$x + y = 90^{\circ}$$

$$x - y = 30^{\circ}$$

$$=> x = 60^{\circ}, y = 30^{\circ}$$

 $\Rightarrow$  Angles are 30°, 60° and 90°

Read the graph carefully and answer the questions given (Q.No. 18 to Q. No. 22):

Question 18.

- (a)(0,1)
- (b)(4,0)
- (c)(2,3)
- (d)(0,6)

Answer: (b) (4,0) Correct option is (b).

Question 19.

The line x - y + 1 = 0 meets Y-axis at:

- (a)(0,1)
- (b)(4,0)
- (c)(2,3)
- (d)(0,6)

Answer: (a) (0,1)

Correct option is (a).

Question 20.

The solutions of the system of equations, x - y + 1 = 0, 3x + 2y - 12 = 0 is :

- (a)(0,1)
- (b)(4,0)
- (c)(2,3)
- (d)(0,6)

Answer: (c) (2,3)

Since the two lines meet at (2, 3)

Correct option is (c).

Question 21.

The area of triangle formed by x-y+1=0, 3x+2y-12=0 and X-axis is :

- (a)  $\frac{15}{2}$  sq. units
- (b)  $9^{2}$  sq. units
- (c) 5 sq. units
- (d) 6 sq. units

Answer: (a)  $\frac{15}{2}$  sq. units

Area of  $\Delta$  formed by x - y + 1 = 0.3x + 2y - 12 = 0 and X-axis is, ( $\Delta$ ABC)

 $\frac{1}{2} \times 5 \times 3 = \frac{15}{2}$  sq. units

Question 22.

The area of triangle formed by x - y + 1 = 0, 3x + 2y - 12 = 0 and x = 0 is:

- (a)  $\frac{15}{2}$  sq. units
- (b) 9 sq. units

(c) 5 sq. units

(d) 6 sq. units

Answer: (c) 5 sq. units

Area required = Area ( $\Delta$ ECD)

$$=\frac{15}{2} \times 5 \times 2 = 5$$
 sq. units

# Question 23.

Find the value of (x + y) if 148x + 231y=527 and 231x + 148y = 610.

(a) 3

(b) 480

(c) 1

(d) 481

Answer: (a) 3

Adding the given equations,

379x + 379y = 1137

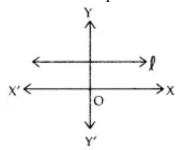
x + y = 3

# Question 24.

The line x = 4:

- (a) passes through origin
- (b) parallel to X-axis
- (c) parallel to Y-axis
- (d) does not meet Y-axis at all

Answer: (c) parallel to Y-axis x = 4 is a line parallel to Y-axis



#### Question 25.

If x and y satisfy the given two equations,  $4x + \frac{6}{y} = 15$ ,  $6x - \frac{8}{y} = 14$ ; find p is y = px - 2.

(a) 1

- (b) 2
- (c) 3
- (d)  $\frac{4}{3}$

Answer: (d)  $\frac{4}{3}$ 

$$4x + \frac{6}{y} = 15$$

$$6x - \frac{\frac{g}{8}}{y} = 14$$

$$=> x = 3$$

$$=> y = px - 2$$

$$y = 2$$

$$=> 2 = 3p - 2$$

=> Correct option is (d).

### Question 26.

Find the value which k cannot take, for the given system to have a unique solutions, x + 2y = 3, ky +5x + 7 = 0.

- (a) 10
- (b)  $\frac{-14}{3}$
- (c) any real
- (d) any real number

number except 10.

Answer: (a) 10

Answer: (a) 10
$$\frac{a1}{a2} = \frac{1}{5}, \frac{b1}{b2} = \frac{2}{k}, \frac{c1}{c2} = -\frac{3}{7}$$

$$\frac{a1}{a2} \neq \frac{b1}{b2}$$

$$\frac{a1}{a2} \neq \frac{b1}{b2}$$

$$k \neq 10$$

# Question 27.

Find p and q so that given system has infinite number of solutions, 4x + 6y - 14 = 0.

$$(p+q)x + (2p-q)y - 3(p+q+1) = 0$$

$$(a)p = 1, q = 1$$

$$(b)p = 1, q = -1$$

(c) 
$$p = 1$$
,  $q = 5$ 

(d) 
$$p = 5$$
,  $q = 1$ 

Answer: (d) p = 5, q = 1

System will have infinite solutions, if

$$\frac{b1}{b2} = \frac{b1}{b2} = \frac{b1}{b2}$$

$$p - 5q = 0$$
 and  $p + q = 6$ 

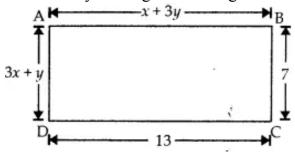
$$p = 5$$

$$q = 1$$

=> Correct option is (d).

# Question 28.

Find x and y in the given rectangle:



(a) 
$$x = 1$$
,  $y = 4$ 

(b) 
$$x = 4$$
,  $y = 1$ 

(c) 
$$x = 2$$
,  $y = 2$ 

(d) 
$$x = 3$$
,  $y = 1$ 

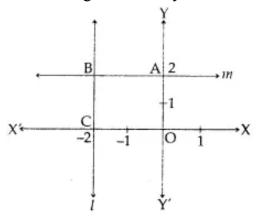
Answer: (a) 
$$x = 1$$
,  $y = 4$ 

$$3x + y = 7 \Rightarrow 3x + y = 7$$

$$x + 3y = 13 \Rightarrow 3x + 9y = 39$$

$$x = 1$$
;  $y = 4$ 

Read the figure carefully and answer fhe following questions (Q. No. 29 to Q. No. 33):



# Question 29.

Equation of line 1 is,

(a) 
$$x = -2$$

(b) 
$$x = 2$$

$$(c)y = 2$$

(d) 
$$y = -2$$

Answer: (a) x = -2

Line l is parallel to Y-axis at a distance of 2 units in the negative direction

- => Equation of line / is x = -2
- => Correct option is (a).

#### Question 30.

Equation of line m is:

- (a) x = -2
- (b) x = 2
- (c) y = 2
- (d) y = -2

Answer: (c) y = 2

 $y = 2 \Rightarrow$  Correct option is (c).

#### Ouestion 31.

The figure obtained by lines l, m, X-axis and Y-axis, can not be the :

- (a) square
- (b) rectangle
- (c) trapezium
- (d) triangle

Answer: (d) triangle

The figure obtained is square. Since every square is a rectangle and is a trapezium also.

Thus, the wrong name is triangle

=> Correct option is (d).

#### Question 32.

Area of figure OABC is (in square units):

- (a) 1
- (b) 2
- (c) 3
- (d) 4

Answer: (d) 4

Area of figure OABC = 4 square units

=> Correct option is (d).

# Question 33.

Coordinates of A, B, C (in order) are:

```
(a) (2,0), (2,-2) (0,-2)
```

(b) 
$$(0,2)$$
,  $(-2,2)$ ,  $(-2,0)$ 

$$(c) (-2,0), (2,2), (0,-2)$$

$$(d) (0,2), (2,2), (0,-2)$$

Answer: (b) (0,2), (-2,2), (-2,0)

A(0,2), B(-2,2), C(-2,0).

=> Correct option is (b).

#### Question 34.

Find the values of x and y if ABCD is a cyclic quadrilateral,  $\angle A = 6x + 10^{\circ}$ ,  $\angle B = (5x)^{\circ}$ ,  $\angle C = (x + y)^{\circ} (\angle D) = (3y-10)^{\circ}$ .

(a) 
$$x = 30^{\circ}$$
,  $y = 20^{\circ}$ 

(b) 
$$x = 20^{\circ}, y = 30^{\circ}$$

(c) 
$$x = 40^{\circ}, y = 10^{\circ}$$

(d) 
$$x = 10^{\circ}, y = 40^{\circ}$$

Answer: (b)  $x = 20^{\circ}$ ,  $y = 30^{\circ}$ 

ABCD is cyclic

$$\Rightarrow$$
  $\angle A + \angle C = 180^{\circ}$  and  $\angle B + \angle D = 180^{\circ}$ 

$$=> 6x + 10 + x + y = 180^{\circ}$$

$$=> 7x + y = 170^{\circ}$$

$$5x + 3y - 10 = 180^{\circ}$$

$$=> 5x + 3y = 190^{\circ}$$

$$x = 20^{\circ}$$
,  $y = 30^{\circ} =>$  Correct option is (b)

# Question 35.

If x + 5y = 34 and x - 5y = -6, find the value of 5y - 2x.

$$(a) - 8$$

Answer: (a) - 8

$$x + 5y = 34$$

$$x - 5y = -6$$

$$x=14$$

Solving these,

$$x = 14$$
;  $y = 4$ 

=> Correct option is (a).

#### Question 36.

Find the value of  $\lambda = \frac{x}{y}$  if bx - ay = a + bax + by = a-b.

- (a) 2
- (b) 1
- (c) 0
- (d) 1

Answer: (d) -1

$$ax + by = a - b$$

$$bx - ay = a + b$$

Solving these

$$x = 1$$

$$y = -1$$

$$\hat{\lambda} = \frac{x}{y} = -1$$

# Question 37.

The given system of equations,

$$-x + 2y + 2 = 0$$

$$\frac{1}{2}x - \frac{1}{4}y - 1 = 0$$
, has :

- (a) a unique solution
- (b) infinite solutions
- (c) no solution
- (d) 2 solutions

Answer: (a) a unique solution  $\frac{a_1}{a_2} = \frac{-1}{1/2} = 2$ 

$$\frac{a1}{a2} = \frac{-1}{1/2} = 2$$

$$\frac{b1}{b2} = \frac{2}{-1/4} = -8$$

since  $\frac{a1}{a2} \neq \frac{b1}{b2}$  Given system of equations has a unique solution.

# Question 38.

The pair of equations x = a and y = b graphically represents lines which are:

- (a) parallel
- (b) intersecting at (b, a)
- (c) intersecting at (a, b)
- (d) coincident

Answer: (c) intersecting at (a, b)

x = a and y = b graphically represents lines which are intersecting at (a, b)

# Question 39.

If x = a and y = b is the solution of the (a) coincident equations  $\frac{4}{x} + 3y = 14$  and  $\frac{3}{x} - 4y = 23$ , then the values of a and b are respectively:

- (a) 2 and 5
- (b) 5 and -2
- (c)  $\frac{1}{5}$  and -2
- (d) 5 and  $-\frac{1}{2}$

Answer: (c)  $\frac{1}{5}$  and -2

let, 
$$\frac{1}{x} = \mathbf{u}$$

$$4 u + 3 y = 14$$

$$3u \square 4y = 23$$

$$u = 5$$

$$y = -2$$

$$X = \frac{1}{5}$$

$$y = -2$$

# Question 40.

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

- (a) 10x + 14y + 4 = 0
- (b) -10x 14y + 4 = 0
- (c) 10x + 14y + 4 = 0
- (d) 10x 14y = -4

Answer: (d) 10x - 14y = -4

$$\frac{a1}{a2} = \frac{b1}{b2} = \frac{c1}{c2}$$

# Question 41.

The pair of equations y = 0 and y = -7 has:

- (a) no solution
- (b) infinitely many solutions
- (c) one solution
- (d) two solutions

Answer: (a) no solution

# Question 42.

Which of the following is not a solution of pair of equations 3x - 2y = 4 and 6x - 4y = 8?

- (a) x = 5, y = 3
- (b) x = 2, y = 1
- (c) x = 6, y = 7
- (d) x = 4, y = 4

Answer: (a) x = 5, y = 3

# Question 43.

The pair of equations x = a and y = b graphically represents lines which are

- (a) parallel
- (b) intersecting at (b, a)
- (c) coincident
- (d) intersecting at (a, b)

Answer: (d) intersecting at (a, b)

### Ouestion 44.

One equation of a pair of dependent linear equations is -5x + 7y = 2, the second equation can be :

- (a) -10x + 14y + 4 = 0
- (b) -10x 14x + 4 = 0
- (c) 10x 14y = -4
- (d) 10x + 14y + 4 = 0

Answer: (c) 10x - 14y = -4

# Question 45.

Two equations in two variables taken together are called

- (a) linear equations
- (b) quadratic equations
- (c) simultaneous equations
- (d) none of these

Answer: (c) simultaneous equations

# Question 46.

8 girls and 12 boys can finish work in 10 days while 6 girls and 8 boys can finish it in 14 days. Find the time taken by the one girl alone that by one boy alone to finish the work.

- (a) 120, 130
- (b) 140,280

- (c) 240,280
- (d) 100,120

Answer: (b) 140,280

Question 47.

The graph of y = 4x is a line

- (a) parallel to x-axis
- (b) parallel to y-axis
- (c) perpendicular to y-axis
- (d) passing through the origin

Answer: (d) passing through the origin

Question 48.

If the pair of equation has no solution, then the pair of equation is:

- (a) inconsistent
- (b) coincident
- (c) consistent
- (d) none of these

Answer: (a) inconsistent

Question 49.

Find the value of 'a" for which the system of equations ax + 2y - 4 = 0 and x - y - 3 = 0 will represent intersecting lines?

- (a)  $a \neq -2$
- (b) a = -2
- (c) a = 2
- (d)  $a \neq 2$

Answer: (a)  $a \neq -2$ 

Question 50.

The pair of equations 3x + 4y = k, 9x + 12y = 6 has infinitely many solutions if –

- (a) k = 2
- (b) k = 6
- (c) k = 6
- (d) k = 3

Answer: (a) k = 2

### Question 51.

If a pair of linear equations is consistent, then the lines will be

- (a) always coincident
- (b) parallel
- (c) always intersecting
- (d) intersecting or coincident

Answer: (d) intersecting or coincident

#### Question 52.

Which of following is not a solution of 3a + b = 12??

- (a)(3,3)
- (b)(5,-3)
- (c)(4,0)
- (d)(2,4)

Answer: (d) (2, 4)

### Question 53.

How many solutions of the equation 15x - 14y + 11 = 0 are possible?

- (a) 2
- (b) No solution
- (c) 1
- (d) Infinite

Answer: (d) Infinite

# Question 54.

The pair of equations 3x - 5y = 7 and -6x + 10y = 7 have

- (a) a unique solution
- (b) infinitely many solutions
- (c) no solution
- (d) two solutions

Answer: (c) no solution

Question 55.

The graph of y = 5 is a line parallel to the

- (a) x-axis
- (b) y-axis
- (c) both axis
- (d) none of these

Answer: (a) x-axis

Question 56.

The value of k, for which equations 3x + 5y = 0 and kx + lOy = 0 has a non-zero solution is

- (a) 6
- (b) 0
- (c) 2
- (d) 5

Answer: (a) 6

Question 57.

The present age of a father is the sum of the ages of his three sons. Ten years from now his age will be a three quarter of the sum of their ages then. How old is the father?

- (a) 50 years
- (b) 30 years
- (c) 40 years
- (d) 60 years

Answer: (a) 50 years

Question 58.

Find a and b for which (a - 1) x + 3y = 2, 6x + (1 - 2b) y = 6 infinite solution.?

- (a) a = -7, b = -4
- (b) a = -1, b = -4
- (c) a = 3, b = -1
- (d) a = 3, b = -4

Answer: (d) a = 3, b = -4

Question 59.

The graph of x = -2 is a line parallel to the

(a) x-axis

- (b) y-axis
- (c) both x- and y-axis
- (d) none of these

Answer: (b) y-axis

Question 60.

The graph of the equation 2x + 3y = 5 is a

- (a) vertical line
- (b) straight line
- (c) horizontal line
- (d) none of these

Answer: (b) straight line

Question 61.

If am bl then the system of equations ax + by = c, lx + my = n, has

- (a) a unique solution
- (b) no solution
- (c) infinitely many solutions
- (d) none of these

Answer: (a) a unique solution

Question 62.

Find the solution to the following system of linear equations:

$$2x-5y+4 = 0 \ 2x+y-8 = 0$$
?

- (a) (3,-2)
- (b)(2,3)
- (c)(-1,2)
- (d)(3,2)

Answer: (d) (3,2)

Question 63.

Which of the following pair of linear equations is inconsistent??

(a) 
$$2x + 3y = 7$$
;  $4x + 6y = 5$ 

(b) 
$$x - 2y = 6$$
;  $2x + 3y = 4$ 

(c) 
$$9x - 8y = 17$$
;  $18x - 16y = 34$ 

(d) 
$$5x - 3y = 11$$
;  $7x + 2y = 13$ 

Answer: (a) 2x + 3y = 7; 4x + 6y = 5

# Question 64.

Find the solution to the following system of linear equations:

2p+3q = 9 p - q = 2?

- (a)(4,2)
- (b)(3,1)
- (c)(2,-3)
- (d)(-4,1)

Answer: (b) (3,1)

# Question 65.

If x = a, y = b is the solution of the equations x + y = 5 and 2x - 3y = 4, then the values of a and b are respectively

- (a) 6, -1
- (b) 2, 3
- (c) 1, 4
- $(d) \frac{19}{5}, \frac{6}{5}$

Answer: (d)  $\frac{19}{5}$ ,  $\frac{6}{5}$ 

# Question 66.

The pair of linear equations 2kx + 5y = 7, 6x - 5y = 11 has a unique solution if

- (a) k = -3
- (b) k = 3
- (c) k = 5
- (d) k = -5

Answer: (a) k = -3

# Question 67.

The pair of equations x = 0 and x = 5 has

- (a) no solution
- (b) unique/one solution
- (c) two solutions
- (d) infinitely many solutions

Answer: (c) two solutions

Question 68.

If A: Homogeneous system of linear equations is always consistent. R: x = 0, y = 0 is always a solution of the homogeneous system of equations with unknowns x and y, then which of the following statement is true?

- (a) A is true and R is the correct explanation of A
- (b) A is false and R is not a correct explanation of A
- (c) A is true and R is false
- (d) A is false and R is true

Answer: (a) A is true and R is the correct explanation of A