Foundation

Udaan 2025

Maths

DHA: 3

Pair of Linear Equations in Two Variables

Q 1 If a pair of linear equations is given by $a_1x + b_1y + c_1 = 0$ and $a_2x + b_2y + c_2 = 0$ and $\frac{a_1}{a_2} = \frac{b_1}{b_2} \neq \frac{c_1}{c_2}$. In this case, the pair of linear equations is consistent.

(A) True (B) False

(C) Cannot say (D) Partially true/false

Q 2 The value of 'k' for which the system of linear equations x + 2y = 3, 5x + ky + 7 = 0 is inconsistent is:

(A) $-\frac{14}{3}$ (B) $\frac{2}{5}$

(C) 5 (D) 10

Q 3 For what value of 'k', will the following pair of linear equations have infinitely many solutions?

2x + 3y = 4 and (k + 2)x + 6y = 3k + 2

(A) 1 (B) 2

(C) 3 (D) 4

Q 4 For what value of 'p', will the following system of linear equations represent parallel lines?

–x + py = 1 and px – y = 1

(A) 2 (B) 3

(C) 1 (D) None of these

Q 5 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

Q 6 The value of 'k' for which the system of equations x – 2y = 3 and 3x + ky = 1 has a unique solution is

(A) k = –6

(B) $k \neq -6$

(C) k = 0

(D) None of these

Q 7 Graphically, the pair of equations $6x - 3y + 10 = 0$, $2x - y + 9 = 0$ represents two lines which are

(A) intersecting at exactly one point.

(B) intersecting at exactly two points.

(C) coincident

(D) parallel

Q 8 If $am \neq bl$, then the system of equations $ax + by = c$ and $lx + my = n$ has

(A) unique solution.

(B) no solution.

(C) infinitely many solutions.

(D) may or may not have a solution.

Q 9 If the pair of linear equations $2x + 3y = 7$ and $2\alpha x + (\alpha + \beta)y = 28$ has infinitely many solutions, then the value ofα and β are

(A) 3 and 5 (B) 4 and 5

(C) 4 and 7 (D) 4 and 8

Q 10 $\frac{x}{2} + y = 0.8, \frac{7}{x+\frac{y}{2}} = 10$

(A) x = 0.4, y = 0.6

(B) x = 0.1, y = 0.5

(C) x = 0.5, y = 0.8

(D) x = 0.2, y = 0.4

Q 11 7(y + 3) – 2(x + 2) = 14, 4(y – 2) + 3(x – 3) = 2

(A) y = 3, x = 2

(B) y = 2, x = 4

(C) y = 3, x = 7

(D) y = 1, x = 5

Answer Key

Q1	**B**
Q2	**D**
Q3	**B**
Q4	**C**
Q5	**D**
Q6	**B**
Q7	**D**
Q8	**A**
Q9	**D**
Q10	**A**
Q11	**D**

Hints & Solutions

Q 1 Video Solution:

Q 2 Video Solution:

Q 3 Video Solution:

Q 4 Video Solution:

Q 5 Video Solution:

Q 6 Video Solution:

Q 7 Video Solution:

Q 8 Video Solution:

Q 9 Video Solution:

Q 10 Video Solution:

Q 11 Video Solution: