Foundation

Udaan 2025

Maths

DHA: 02

Pair of Linear Equations in Two Variables

Q 1 Find the solution of the following system of equations by substitution method.

$x + y = 8, 2x - 3y = 1$

(A) $x = 4, y = 5$

(B) $x = 5, y = 3$ Calculation error

(C) $x = 3, y = 5$

(D) $x = 2, y = 7$

Q 2 Find the solution of the following system of equations by substitution method.

$3x + 2y = 10, 12x + 8y = 30$

(A) No solutions exists

(B) 2

(C) 3

(D) 4

Q 3 Find the solution of the following system of equations by substitution method. $a_1/a_2 = b_1/b_2 = c_1/c_2$

$2x - 7y = 11, 6x - 21y = 33$

(A) 4

(B) 2

(C) Infinitely many solutions

(D) None of these

Q 4 Find the solution of the following system of equations by substitution method.

$\sqrt{2}x + \sqrt{5}y = 0, \sqrt{6}x + \sqrt{15}y = 0$

(A) 0

(B) 1

(C) -1

(D) Infinitely many solutions

Q 5 Find the solution of the following system of equations by substitution method.

After solving eqn if we get constt = constt then the system has infinite solutions

$3x - y = 3, 9x - 3y = 9$

(A) Infinitely many solutions

(B) 6

(C) 9

(D) None of these

Q 6 Solve $2x - 3y = 13$ and $7x - 2y = 20$ and hence find the value of m for which $y = mx + 7$.

(A) $x = 2, y = -3, m = -5$ Put the values of y and x to get the value of m

(B) $x = 3, y = -2, m = -3$

(C) $x = 3, y = -5, m = -6$

(D) $x = 4, y = -5, m = -3$

Q 7 Solve $5x + 4y = 10$ and $3x - 2y + 16 = 0$ and hence find the value of m for which $y = mx + 3$.

(A) $x = 2, y = -7, m = -4$

(B) $x = -2, y = 5, m = -1$

(C) $x = 1, y = -5, m = -4$

(D) $x = 5, y = -1, m = -2$

Q 8 Solve for x and $y \cdot ax + by = \frac{a+b}{2}; 3x + 5y = 4$

(A) $x = \frac{1}{2}, y = 1$

(B) $x = \frac{1}{2}, y = \frac{1}{2}$

(C) $x = 1, y = 1$

(D) $x = 1, y = \frac{1}{2}$

Q 9 The pair of equations $3^{x+y} = 81, 81^{x-y} = 3$ has

(A) no solution

(B) Infinitely many solution

(C) the solution $x = 2\frac{1}{8}, y = 1\frac{7}{8}$

(D) None of these

Answer Key

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

Hints & Solutions

Q 1 Text Solution:

x = 5, y = 3

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: