NCERT Solutions Class 9 Maths
Chapter 4: Linear Equations in Two Variables
EXERCISE 4.2

Document Information:
Class: 9 | **Subject:** Mathematics | **Chapter:** 4 | **Exercise:** 4.2
Total Questions: 4 | **Academic Year:** 2025-26
Source: www.ncertbooks.net | **Generated:** February 21, 2026

Quick Summary: In NCERT Solutions Class 9 Maths Chapter 4 Exercise 4.2, students learn to find and verify solutions of linear equations in two variables. This exercise covers systematic methods for solving equations of the form ax + by + c = 0 and determining ordered pairs (x, y) that satisfy these equations, which are essential concepts for CBSE Class 9 exams and coordinate geometry.

Key Takeaways:

- A linear equation in two variables has the standard form ax + by + c = 0 where a and b are not both zero
- Solutions are ordered pairs (x, y) that make the equation true when substituted
- For any given x value, solve for y using y = (-ax - c)/(b) (when b ≠ 0)
- Verification involves substituting the ordered pair back into the original equation to check if both sides are equal

Complete Solutions

Question 1

QUESTION

Which one of the following options is true, and why?
For the equation y = 3x + 5:

(i) a unique solution
(ii) only two solutions
(iii) infinitely many solutions

SOLUTION

The equation is a straight line. Any value of produces exactly one value of , and every point on that line is a solution.

A line in the plane has infinitely many points, so the equation has infinitely many solutions. That matches option (iii).

ANSWER

(iii), because for every value of x, there is a corresponding value of y and vice-versa.

Question 2

QUESTION

Write four solutions for each of the following equations:

(i) 2x + y = 7
(ii) π x + y = 9
(iii) x = 4y

SOLUTION

For each equation, pick convenient values and solve for , or pick and solve for . Each ordered pair that satisfies the equation is a valid solution.

Example for : if then ; if then so ; if then ; if then . Similar substitutions generate the listed pairs for the other equations.

ANSWER

(i) (0, 7), (1, 5), (2, 3), (4, -1)

(ii) (1, 9 - π), (0, 9), (-1, 9 + \pi), \left((9)/(π), 0\right)

(iii) (0, 0), (4, 1), (-4, 1), \left(2, (1)/(2)\right)

Question 3

QUESTION

Check which of the following are solutions of the equation x - 2y = 4 and which are not:

(i) (0, 2)
(ii) (2, 0)
(iii) (4, 0)
(iv) ($\sqrt{2}$, $4\sqrt{2}$)
(v) (1, 1)

SOLUTION

Test each ordered pair by substituting into . If the left-hand side equals 4, it is a solution.

(i) ≠ 4, so not a solution.

(ii) ≠ 4, so not a solution.

(iii) matches 4, so this is a solution.

(iv) , not 4, so not a solution.

(v) ≠ 4, so not a solution.

ANSWER

(i) No

(ii) No

(iii) Yes

(iv) No

(v) No

Question 4

QUESTION

Find the value of k, if x = 2, y = 1 is a solution of the equation 2x + 3y = k.

SOLUTION

Plug and into .

Compute left side: . For this to be a solution, must equal 7.

ANSWER

7

📚 Relevant Resources

Explore more NCERT solutions (click links to visit):

Resource	Visit Link
NCERT Class 9 Mathematics Textbook	Download Book →
NCERT Class 9 Science Solutions	View Solutions →
RD Sharma Class 9 (Updated 2025-26)	View Solutions →
NCERT Class 9 English (Beehive)	Download Book →

📝 Key Formulas

Important Formulas for Exercise 4.2

Formula / Concept	Description
Linear Equation in Two Variables	An equation that can be written in the form ax + by + c = 0, where a, b, and c are real numbers, and 'a' and 'b' are not both zero. The variables are typically x and y, and the highest power of each variable is 1.
Standard Form	The standard form of a linear equation in two variables is ax + by + c = 0. For example, 10x + 4y = 3 and -x + 5y = 2 are linear equations in two variables.
Solution of a Linear Equation	

Formula / Concept	Description
	A pair of values, one for x and one for y, which when substituted into the equation, make the two sides of the equation equal. This pair of values is written as an ordered pair (x, y).
Infinitely Many Solutions	A linear equation in two variables has infinitely many solutions. For every value of x, there is a corresponding value of y that satisfies the equation, and vice versa.
Graphical Representation	The graph of a linear equation in two variables is a straight line. Every point on the line represents a solution to the equation.
Finding a Solution	To find a solution, you can substitute a value for one variable (e.g., x = 0 or x = 1) and solve the equation for the other variable. For example, in the equation 2x + y = 7, if we take x=1, then 2(1) + y = 7, which gives y=5. So, (1, 5) is a solution.

Top FAQs

Q1. How many questions are in NCERT Solutions Class 9 Maths Chapter 4 Linear Equations in Two Variables Exercise 4.2?

Exercise 4.2 of NCERT Solutions for Class 9 Maths Chapter 4 Linear Equations in Two Variables contains exactly 4 questions. These questions focus on finding solutions of linear equations in two variables and verifying whether given pairs satisfy the equations. All 4 questions are explained with step by step solutions in the NCERT textbook for CBSE board exam 2025-26 preparation.

Q2. Where can I download free PDF of NCERT Solutions for Class 9 Maths Chapter 4 Linear Equations in Two Variables Exercise 4.2?

You can download the free PDF of NCERT Solutions for Class 9 Maths Chapter 4 Linear Equations in Two Variables Exercise 4.2 from the official NCERT website or various educational portals offering CBSE study materials. These PDFs contain step by step solutions for all 4 questions and are updated according to the latest CBSE syllabus 2025-26. The solutions are provided in a detailed manner to help students understand the concept of solutions of linear equations thoroughly.

Q3. How many marks does Linear Equations in Two Variables carry in CBSE Class 9 Maths board exam 2025-26?

Linear Equations in Two Variables from NCERT Class 9 Maths Chapter 4 carries approximately 10 marks weightage in CBSE board exam 2025-26 under Unit II - Algebra. This chapter shares weightage with other algebra topics, making Exercise 4.2 an important part of exam preparation. Students should practice all questions including Exercise 4.2 thoroughly to score well in the CBSE Class 9 Mathematics examination.

Q4. Which is the most difficult question in NCERT Solutions Exercise 4.2 of Class 9 Maths Chapter 4 Linear Equations in Two Variables?

Question 4 is generally considered the most challenging in Exercise 4.2 of NCERT Solutions for Class 9 Maths Chapter 4 Linear Equations in Two Variables as it requires students to find solutions and plot them graphically. This question tests multiple concepts including finding solution pairs and understanding their representation, which needs thorough practice. However, with step by step solutions and proper understanding of the solution concept, students can master this question for CBSE board exam 2025-26.

Q5. What is Linear Equation in Two Variables in NCERT Class 9 Maths Chapter 4 Exercise 4.2?

A Linear Equation in Two Variables, as explained in NCERT Class 9 Maths Chapter 4 Exercise 4.2, is an equation of the form ax + by + c = 0, where a, b, and c are real numbers and both a and b are not zero simultaneously. Exercise 4.2 specifically deals with finding solutions of such equations, where a solution is an ordered pair (x, y) that satisfies the given linear equation. This concept is fundamental for CBSE Class 9 board exam 2025-26 and carries significant weightage in the Algebra unit.

More Exercises

Visit all exercises from Chapter 4:

EXERCISE 4.1 →

EXERCISE 4.2 ✓ →

Complete Chapter: Class 9 Maths Ch 4: Linear Equations in Two Variables →