

Worksheet: Linear Equations in Two Variables

Punjab State Board · Class 9 · Mathematics · 14 questions · 31 marks

Name: _____

Date: _____

Score: _____ / 31

Q1. Express $5y = 3x - 7$ in standard form $ax + by + c = 0$ and write a, b, c. [1 mark]

Q2. Is (2, 1) a solution of $3x + 2y = 4$? [1 mark]

Q3. Is (1, 3) a solution of $2x - y + 1 = 0$? [1 mark]

Q4. Write the equation of the x-axis. [1 mark]

Q5. Equation of the horizontal line through (4, 2)? [1 mark]

Q6. Find four solutions of $2x + 3y = 12$. [2 marks]

Q7. If (3, k) is a solution of $4x + 3y = 18$, find k. [2 marks]

Q8. Find the x- and y-intercepts of $3x - 4y = 12$ and sketch the line. [3 marks]

Q9. A line passes through (0, 5) and (5, 0). Find its equation. [2 marks]

Q10. Find three solutions of $2x + y = 0$ and identify what's special. [2 marks]

Q11. If (4, 2) is a solution of $px + 3y = 14$, find p. [3 marks]

Q12. A taxi charges ₹50 booking fee plus ₹15 per km. Let x = distance in km and y = total fare. Write the linear equation, find three solutions, and identify the y-intercept and what it represents in this context. [4 marks]

Q13. Show that the line passing through (1, 1), (2, 2) and (3, 3) is $y = x$, and find the point on this line whose x-coordinate is 5. [4 marks]

Q14. Plan A: ₹100 fixed + ₹2/min talktime. Plan B: ₹0 fixed + ₹3/min. For what talktime are the two plans equally expensive? [4 marks]
