

## Worksheet: Linear Equations in Two Variables

Uttar Pradesh 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]

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

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

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

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

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**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]

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**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]

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**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]

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