

## PRACTICE TEST: CLASS-X

### LINEAR EQUATIONS IN TWO VARIABLES

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1. Solve the following linear equations by substitution method.
  - a)  $s - t = 3$  ;  $\frac{s}{3} + \frac{t}{2} = 6$
  - b)  $0.2x + 0.3y = 1.3$  ;  $0.4x + 0.5y = 2.3$
2. Form equations and find solutions by substitution method:
  - a) The taxi charges in a city consist of a fixed charge together with the charge for the distance covered. For a distance of 10km, the charge per km paid is Rs. 105 and for a journey of 15km, the charge paid Rs. 155. What are the fixed charges and the charge per km? How much does a person have to pay for travelling a distance of 25km?
  - b) A fraction becomes  $\frac{9}{11}$ , if 2 is added to both the numerator and the denominator. If 3 is added to both the numerator and denominator it becomes  $\frac{5}{6}$ . Find the fraction.
3. Use elimination method:
  - a)  $3x + 4y = 10$  ;  $2x - 2y = 2$
  - b)  $\frac{x}{2} + \frac{2y}{3} = -1$  ;  $x - \frac{y}{3} = 3$
  - c) Five years ago, Nuri was thrice as old as Sonu. Ten years later, Nuri will be twice as old as old as Sonu. How Sold are Sonu and Nuri.
  - d) The sum of two-digit no is 9. Nine times this number is twice the number obtained by reversing the order of the digits. Find the number.
4. Cross multiply:
  - a)  $\frac{x}{a} - \frac{y}{b} = 0$  ;  $ax + by = a^2 + b^2$
  - b)  $(a - b)x + (a + b)y = a^2 - b^2 - 2ab$  ;  $(a + b)(x + y) = a^2 + b^2$
  - c) 2 women and 5 men can together finish a task in 4 days while 3 women and 6 men can finish it in 3 days. Find the time taken by 1 woman and 1 man to finish the task.
5. Sushant travels 300km to her home partly by train and partly by bus. He takes 4hr if he travels 100km by train and rest by bus he takes 10 min longer. Find the speed of the speed of the train and bus.
6. One "Give me a hundred, friend! I shall then become twice as rich as you." The other replies, "If you give me ten, I shall be six times as rich as you." Find the money they had.

7. A train covered a certain distance at a uniform speed. If the train would have been 10km/h faster, it would have taken 2hr less than the scheduled time. And if the train were 10km/h it would have taken 3hr more than the scheduled time. Find the distance covered by train.
8. The students of a class are made to stand in rows. If 3 students are less in a row, there would be 1 row less. If 3 students are less in a row, there would be 2 rows more. Find the number of students in a class.

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