



# UNIQUE STUDY POINT

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1

## SHORT ANSWER TYPE QUESTIONS

Q1. Solve the following pair of linear equations:

- |  |   |
|--|---|
| a) $ax + by = a - b$                       | $bx - ay = a + b$   |
| b) $(a + 2b)x + (2a - b)y = 2$             | $(a - 2b)x + (2a + b)y = 3$                               |
| c) $(a - b)x + (a + b)y = a^2 - 2ab - b^2$ | $(a + b)(x + y) = a^2 + b^2$                              |
| d) $ax/b - by/a = a + b$                   | $ax - by = 2ab$   |
| e) $5/(x+1) - 2/(y-1) = 1/2$               | $10/(x+1) + 2/(y-1) = 5/2$                                |
| f) $a^2/x - b^2/y = 0$                     | $a^2b/x + b^2a/y = a + b, x, y \neq 0$                    |
| g) $mx - ny = m^2 + n^2$                   | $x - y = 2n$  |
| h) $xy/(x + y) = 6/5$                      | $xy/(y - x) = 6 \quad \{(x + y) \neq 0, (y - x) \neq 0\}$ |
| i) $x/a - y/b = (a - b)$                   | $x/a^2 - y/b^2 = 0$                                       |
| j) $b^2x/a - a^2y/b = ab(a + b)$           | $b^2x - a^2y = 2a^2b^2$                                   |

2

If 1 is added to each of the given two numbers, then their ratio is 1:2. If 5 is subtracted from each of the numbers, then their ratio is 5:11. Find the numbers.

3

The ratio of the incomes of two persons is 9:7 and the ratio of their expenditures is 4:3. If each of them saves Rs.200 per month, find their monthly incomes.

4

Seven times a 2-digit number is equal to four times the number obtained by reversing the order of the digits. If the sum of both the digits is 9, find the number.

5

A father's age is three times the sum of the ages of his two children. After 5 years, his age will be two times the sum of their ages. Find the present age of the father. (CBSE 2019)

6

The students of a class are made to stand in rows. If 3 students are extra 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 the class.

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