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Worksheet: Pair of Linear Equations

1. The sum of thrice the first and the second is 142 and four times the first exceeds the second by 138, then find the numbers.
2. The sum of two numbers is 137 and their difference is 43. Find the numbers.
3. The difference between two numbers is 14 and the difference between their squares is 448, then find the numbers.
4. The denominator of a fraction is greater than its numerator by 11. If 8 is added to both its numerator and denominator, it reduces to $\frac{1}{2}$. Find the fraction.
5. From a bus stand in Bangalore , if we buy 2 tickets to Malleswaram and 3 tickets to Yeshwanthpur, the total cost is Rs 46; but if we buy 3 tickets to Malleswaram and 5 tickets to Yeshwanthpur the total cost is Rs 74. Find the fares from the bus stand to Malleswaram, and to Yeshwanthpur.
6. A and B each has some money. If A gives Rs. 30 to B then B will have twice the money left with A. But if B gives Rs. 10 to A then A will have thrice as much as is left with B. How much money does each have?
7. Meena went to a bank to withdraw Rs 2000. She asked the cashier to give her Rs 50 and Rs 100 notes only. Meena got 25 notes in all. Find how many notes of Rs 50 and Rs 100 she received.
8. The students of a class are made to stand in rows. If 4 students are extra in a row, there would be 2 rows less. If 4 students are less in a row, there would be 4 rows more. Find the number of students in the class.
9. The larger of two supplementary angles exceeds the smaller by 18 degrees. Find them.
10. A two-digit number is 4 more than 6 times the sum of its digit. If 18 is subtracted from the number, the digits are reversed. Find the number.
11. The sum of the digits of a two digit number is 9. If 27 is added to it, the digits of the numbers get reversed. The number is
12. 5 pencils and 7 pens together cost Rs 50, whereas 7 pencils and 5 pens together cost Rs 46. Find the cost of one pencil and that of one pen.
13. The ratio of incomes of two persons is 9 : 7 and the ratio of their expenditures is 4 : 3. If each of them manages to save Rs 2000 per month, find their monthly incomes.
14. One says, "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". Tell me what is the amount of their (respective) capital?
15. Find the value of x and y if $x + y = 5xy$ and $3x + 2y = 13xy$. Also, $x \neq 0$ and $y \neq 0$

- 16.** A lending library has a fixed charge for the first three days and an additional charge for each day thereafter. Saritha paid Rs 27 for a book kept for seven days, while Susy paid Rs 21 for the book she kept for five days. Find the fixed charge and the charge for each extra day
- 17.** The solution of the equations $x + y = 14$ and $x - y = 4$ is