

## LINEAR EQUATIONS IN TWO VARIABLES

1. The numerator of a fraction is 4 less than the denominator. If the numerator is decreased by 2 and denominator is increased by 1, then the denominator is eight times the numerator. Find the fraction
2. A fraction becomes  $\frac{13}{1}$  if 1 is subtracted from both its numerator and denominator. If 1 is added to both the numerator and denominator, it becomes  $\frac{12}{1}$ . Find the fraction.
3. The sum of the numerator and denominator of a fraction is 4 more than twice the numerator. If the numerator and denominator are increased by 3, they are in the ratio 2 : 3. Determine the fraction
4. A father is three times as old as his son. After twelve years, his age will be twice as that of his son then. Find their present ages.
5. Six years hence a man's age will be three times the age of his son and three years ago, he was nine times as old as his son. Find their present ages
6. Ten years ago, a father was twelve times as old as his son and ten years hence, he will be twice as old as his son will be then. Find their present ages.
7. Two years ago, a father was five times as old as his son. Two years later, his age will be 8 more than three times the age of the son. Find the present ages of father and son.

8. If in a rectangle, the length is increased and breadth reduced each by 2 units, the area is reduced by 28 square units. If, however the length is reduced by 1 unit and the breadth increased by 2 units, the area increased by 33 square units. Find the area of the rectangle.
9. The area of a rectangle remains the same if the length is increased by 7 metres and the breadth is decreased by 3 metres. The area remains unaffected if the length is decreased by 7 metres and breadth is increased by 5 metres. Find the dimensions of the rectangle.
10. The incomes of X and Y are in the ratio of 8 : 7 and their expenditures are in the ratio 19 : 16. If each saves ₹ 1250, find their incomes.