PROPORTION

Four quantities are said to be in proportion, if the ratio of the first and the second quantities is equal to the ratio of the third and the fourth quantities.

Eg.1   3, 10, 15, 50 are in proportion, since

$\frac{3}{10} = \frac{15}{50}$. We indicate the proportion by 3:10 :: 15:50, it is read as 3 is to 10 as 15 is to 50.

 In the above proportion, 3 and 50 are the extreme terms and 10 and 15 are the middle terms.

Note-

  • 3, 10, 15 and 50 are in proportion, but 3, 10, 50 and 15 are not, since T**he order of terms in the proportion is very important**. since $\frac{3}{10} = \frac{15}{50}$ bu $\frac{3}{10} \neq \frac{50}{15}$

  • We can also check for proportion by multiplying middle terms and extreme terms, If they are equal then the terms are in proportion else not.
  • Some times simplifying the ratios and comparing is also an easier way to check for proportion. As in example1.
  • Cross multiplication is the third way to check for proportion as shown below.
  • $\frac{3}{10} = \frac{15}{50}$