UNITARY METHOD

Unitary Method is one in which the value of a unit quantity is first obtained to find the value of any given quantity.

Variation means change

A quantity which takes different values is called a variable. Ex: x, y...

A quantity which does not change is called a constant. Ex: 2, 3/4,π

DIRECT PROPORTION/DIRECT VARIATION: Let x and y be to variables such that ratio of y to x is a constant, y varies directly with x or y is directly proportional to x. This is represented as y/x=k : y=kx where k= constant of proportionality **.Symbol used is"α".**

INVERSE PROPORTION/IN DIRECT VARIATION: Let x and y be to variables such that product of two variables is a constant. i.e. xy=k : x=k/y where k= constant of proportionality **.Symbol used is"1/α"**

Types of Variation

Direct Variation: The increase in one quantity causes increase in other and decrease in one quantity will decrease in other.

Inirect Variation: The increase in one quantity causes decrease in other and decrease in one quantity will increase in other.

While applying unitary method, arrange statement in such a way that, whatever is asked to find in the question is written at the end of the statement.

TIME AND WORK:

- $\text{One day's work} = \frac{1}{\text{No of days required to complete the work}}$
- $\text{No. of days required to do certain work} = \frac{1}{\text{One day's work}}$
- $\text{No. of days required to complete certain work} = \frac{\text{Work to be completed}}{\text{One day's work}}$
- $\text{A is completes work in x days and B in y days, then One day's work} = \frac{1}{x} + \frac{1}{y}$