Average

Important terms:

Average is defined as the ratio of sum of all terms in a group to the number of items in the group.

Important Formulae:

1) If number of quantities/items/members etc. and their total quantity are given, then we can find the average by using formula shown below. Sometimes, averages and total quantities are mentioned in the question and we have to determine number of quantities.

Hence, remember this formula can be used in number of ways to solve the numericals on ages/weights/ marks/ etc.

Average =Sum of Quantities / Number of Quantities

2) A person travels a distance at a speed of V1 km/hr and same distance at a speed of V2 km/hr. His average speed in the whole journey can be determined using the formula shown below:

Average Speed =(2 V1 V2)/(V1 + V2)

3) There are two batches A and B in a class. If we have to find the average of the whole class use the formula shown below:

Batch A: Number of students = a

Average of batch A = x

Batch B: Number of Students = b

Average of batch B = y

Average of whole class (Batch 1 and Batch 2) =(ax + by)/(a + b)

Quick Tips and Tricks:

1) Average of n natural numbers = (n + 1) / 2

2) Average of even numbers = (n + 1)

3) If value of each term increases/decreases by x, then the average of the group also increases/decreases by a.

4) If we know average of two groups individually, then the average of combined group cannot be determined.