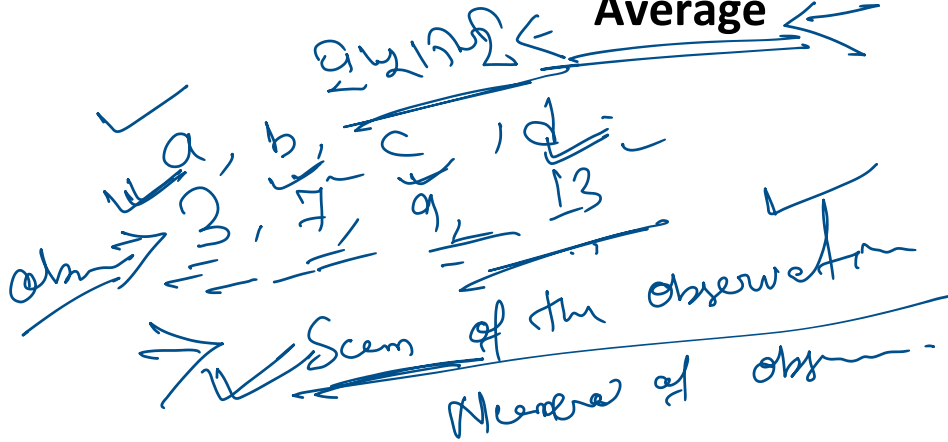


For all OSSC EXAM
Math Marathon Class

Av km/h

Average ←



$$\Rightarrow \frac{3+7+9+13}{4}$$

$$\Rightarrow \frac{32}{4} = 8$$

✓ Find out the average of 308, 125, 45, 120 and 102.

$$\frac{308+125+45+120+102}{5}$$

$$\Rightarrow \frac{700}{5} = 140$$

✓ If the weight of A is 60 kg, weight of B is 45 kg and weight of C is 54 kg, then what is the average weight of three persons?

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$A \rightarrow 60, B = 45, C = 54$
 $\frac{60 + 45 + 54}{3} = \frac{159}{3} = 53$
 base = formula -

✓ ① 1 + 2 + 3 + ... + 51
 What will be the average of numbers from 1 to 51?

Sum = $\frac{n(n+1)}{2}$
 $n = 51$
 $\frac{51+1}{2} = 26$
 (26)

✓ Find out the average of 4, 7, 10, 13, ..., 28, 31. Sol. Here, the difference between any two numbers written in continuous sequence is 3. Hence, this is a series of consecutive numbers

4 7 10
 (3) (3)
 4, 7, 10, 13, ..., 28, 31
 $\frac{4 + 31}{2} = 17.5$
 (17.5)

$$\frac{4+21}{2} = 12.5$$

Handwritten notes: \Rightarrow 12.5

Find the average of all the odd numbers and average of all the even numbers from 1 to 45

1 to 45

30 numbers

1 - 45

odd \Rightarrow Last number + 1

$\Rightarrow \frac{45+1}{2} = \frac{46}{2} = 23$

Even numbers \Rightarrow 44 \rightarrow 45

42 \leftarrow 43

$\frac{44+2}{2} = \frac{46}{2} = 23$

A man bought 20 cows in Rs 200000. If the average cost of 12 cows is Rs 12500, then what will be the average cost of remaining cows?

\Rightarrow 200000

$\Rightarrow \frac{20}{12} \rightarrow 125000$ Average

\Rightarrow 15 cows

$$\begin{aligned} \text{Total} &\rightarrow \frac{12 \rightarrow 125000}{150000} \\ 8 &\rightarrow 5000 \rightarrow 5000 \\ &= 6250 \end{aligned}$$

The average age of 25 boys in a class decreases by 6 months, when a new boy takes the place of a 20 yr old boy. Find out the age of new boy

$$\begin{aligned} &\Rightarrow \text{6 months} \leftarrow \frac{1}{2} \text{ yr} \\ &\frac{25}{2} \\ &25 \times \frac{1}{2} \\ &\Rightarrow 12.5 \\ &20 - 12.5 = 7.5 \end{aligned}$$

A person covers a certain distance by car at a speed of 25 km/h and comes back at a speed of 40 km/h. What is his average speed during his travel?

$$\frac{2 \times 25 \times 40}{25 + 40}$$

