Examples

Tuesday, March 30, 2021 10:01 AM

Ex: Soham obtains 62, 78, 88, 93 and 79 marks in English, Maths, Phy, Chem, Bio. find average?

$$\text{Average} = \frac{62 + 78 + 88 + 93 + 79}{5}$$

$$= \frac{400}{5} = 80$$

Ex: A student was asked to find the arithmetic mean of numbers 3, 11, 7, 9, 15, 13, 8, 19, 17, 21, 14 and x and he found mean 12. find x?

$$\frac{3 + 11 + 7 + \cdots + x}{12} = 12 \quad \Rightarrow x + 137 = 12 \times 12 = 144$$

$$\Rightarrow x = 144 - 137 = 7$$

Ex: There are two sections A & B consisting 10, 20 students respectively. If average weight of section A is 60 kg. section B 45 kg. find avg?

$$\text{Average} = \frac{60 \times 10 + 45 \times 20}{10 + 20} = \frac{600 + 900}{30}$$

$$= 1500/$$

$10 + 20 = 30$

$= 1500/30 = 50$ //

Ex: A batsman makes a score of 97 runs at 21st inning and thus increases his average by 2. Find the average after 21th inning.

→ Average of 21th inning $= x$

Average of 20th inning $= (x-2)$

Average

$\Rightarrow (20 \times (x-2)) + 97 = 21x$

$\Rightarrow 20x - 40 + 97 = 21x$

$\Rightarrow x = 57$ //

Ex: Distance b/w two stations A and B is 800 km. A train covers the journey from A to B at 80 kmph. and return back B to A with uniform speed of 40 kmph find average speed of a train during whole journey

→ $\left(\frac{2 \cdot x \cdot y}{x+y}\right) = \left(\frac{2 \times 80 \times 40}{80+40}\right) = 53.33$ kmph

$\frac{800}{80} = 10$ // $\frac{800}{40} = 20$ // $\frac{160}{3} = 53.33 \ldots$

Ex. The average score of a cricketer for ten matches is 38.9 runs. If the average for first six matches is 42. find the average for last four matches.

→ $\frac{38.9 \times 10 - 42 \times 6}{4} = 34.25$

Ex. To solve