

Day -3 - Average Questions practice

Feb 8 2026

- 1.) The average of 18 numbers is 24. When two more numbers are added , the average becomes 25. If one of the added numbers is 30, find the other number?

$$1 \text{ to } 18 = 24 \times 18 = 432$$

$$\checkmark \quad 1 \text{ to } 20 = 25 \times 20 = 500$$

$$\Rightarrow \text{Old total} - \text{New Total}$$

$$= \cancel{500} - 432 = 68$$

$$A = 30, B = ?$$

$$B = 38$$

$$\begin{array}{r} 3 \\ 24 \\ \times 18 \\ \hline 192 \\ 24 \\ \hline 432 \end{array} \quad \begin{array}{r} 16 \\ 8 \\ \times 25 \\ \hline 24 \\ 8 \\ \hline 32 \end{array}$$

$$\begin{array}{r} 25 \\ 500 \\ \times 20 \\ \hline 1000 \\ 500 \\ \hline 500 \end{array} \quad \begin{array}{r} 25 \\ 20 \\ \times 25 \\ \hline 25 \\ 20 \\ \hline 500 \end{array}$$

- 2) The average age of a family of 6 members is 28 years. When the age of the youngest member is excluded, the average increases by 3 years. Find the age of the youngest member?

$$1 \text{ to } 6 = 28 \times 6 = 168$$

$$\checkmark \quad 1 \text{ to } 5 = 28 + 3 \times 5 = 31 \times 5 = 155$$

$$\boxed{\text{Youngest member age} = 13}$$

$$\begin{array}{r} 42 \\ 6 \\ \times 28 \\ \hline 168 \\ 155 \\ \hline 13 \end{array}$$

- 3.) The average of 12 numbers is 40. If the average of the first 5 numbers is 36 and that of the last 5 numbers is 44, find the average of the middle two members?

$$1 \text{ to } 12 = 40 \times 12 = 480$$

$$1 \text{ to } 5 = 36 \times 5 = 180$$

$$8 \text{ to } 12 = 44 \times 5 = 220$$

$$\Rightarrow 480 - 400 = (80)$$

$$\begin{array}{r} 40 \\ 12 \\ \times 40 \\ \hline 80 \\ 40 \\ \hline 480 \\ 220 \\ \hline 180 \end{array}$$

$$\boxed{A = 40 \quad B = 40}$$

4) The average marks of 25 students is 60. If the marks of one student are wrongly recorded as 20 instead of 50, find the correct average?

$$1 \text{ to } 25 = 60 \times 25 = 1500$$

$$A = 20 \Rightarrow 1500 - 20 = 1480$$

$$\begin{array}{r} 410 \\ 1800 \\ - 20 \\ \hline 1480 \\ - 50 \\ \hline 1530 \\ - 1200 \\ \hline 1500 \end{array}$$

$$A = 50 \Rightarrow 1480 + 50 = 1530$$

$$= 7.2 \quad \boxed{\text{Ans} = 7.2}$$

$$= \frac{61.2}{25} = 61.2$$

$$\boxed{\text{Ans} = 61.2}$$

5) The average income of A, B, and C is ₹ 8000. The average income of B, C and D is ₹ 9000. If D's income is ₹ 10,000, find A's income?

$$A, B, C = 8000 \times 3 = 24,000$$

$$\begin{array}{r} 16000 \\ 8000 \\ \hline 24000 \end{array}$$

$$B, C, D = 9000 \times 3 = 27,000$$

$$\begin{array}{r} 12000 \\ 9000 \\ \hline 21000 \end{array}$$

$$D = 10,000$$

$$B, C = 17,000$$

$$\begin{array}{r} 27000 \\ 10000 \\ \hline 17000 \end{array}$$

$$\begin{array}{r} 14000 \\ 17000 \\ \hline 7000 \end{array}$$

$$\boxed{A = 7000}$$

6) The average of 9 consecutive even numbers is 52. Find the difference between the largest and smallest numbers?

$$1 \text{ to } 9 = 52 \cancel{+ 2}$$

$$9-1 = 8, 7, 5, 3, 6, 4, 2,$$

$$52-8 \quad 52-6 \quad 52-4 \quad 52-2 \quad 52 \cancel{+ 2} \quad 52+2 \quad 52+4 \quad 52+6 \quad 52+8$$

$$\underline{44}, \quad 46, 48, 50, 52, 54, 56, 58, 60$$

$$\text{Smallest} = 52 - (9-1) \Rightarrow 52 - 8 = 44 \quad \boxed{\text{Shortcut!}}$$

$$\text{largest} = 52 + (9-1) \Rightarrow 52 + 8 = 60$$

$$\Rightarrow 60 - 44 = 16 \quad \boxed{\text{Ans} = 16}$$

7) The average expenditure of a man for 6 months is ₹ 3,200. His average expenditure for the first 2 months is ₹ 2800 and for the last 2 months is ₹ 3,600. Find his average expenditure for the middle 2 months?

$$1 \text{ to } 6 = 3,200 \times 6 = 19,200$$

$$\begin{array}{r} 111 \\ 5600 \\ \hline 111 \end{array}$$

$$1 \text{ to } 2 = 2,800 \times 2 = 5,600$$

$$7200 + 5600$$

$$5 \text{ to } 6 = 3,600 \times 2 = 7,200$$

$$\Rightarrow 12,800$$

$$\text{Total 4 months} = 12,800$$

$$\begin{array}{r} 812 \\ 19200 \\ \hline 12800 \end{array}$$

$$\Rightarrow \frac{3200}{2} = 3200$$

$$\begin{array}{r} 6400 \\ \hline 12,800 \end{array}$$

Ans:- $\boxed{A = 3200 \quad B = 3200}$

$$\begin{array}{r} 6400 \\ \hline 12,800 \\ 6400 \\ \hline 19200 \end{array}$$

8.) The average speed of a car for the first half of the journey is 40 km/hr and for the second half is 60 km/hr. Find the average speed for the whole journey?

$$1^{\text{st}} \text{ half} = 40 \text{ km/hr}$$

$$\boxed{\frac{2xy}{x+y}}$$

$$2^{\text{nd}} \text{ half} = 60 \text{ km/hr.}$$

$$\Rightarrow \frac{2 \times 40 \times 60}{40+60} = \frac{80 \times 60}{100} = \frac{4800}{100} = 48 \text{ km/hr}$$

$$\begin{array}{r} 80 \\ 60 \\ \hline 100 \\ 4800 \end{array}$$

Ams $\boxed{= 48 \text{ km/hr}}$

9.) The average of 7 numbers is 45. If the average of the first 3 numbers is 40 and the average of the last 3 numbers is 50, find the middle number?

$$1 \text{ to } 7 = 45 \times 7 = 315$$

$$\begin{array}{r} 45 \\ 7 \\ \hline 315 \end{array}$$

$$1 \text{ to } 3 = 40 \times 3 = 120$$

$$\begin{array}{r} 45 \\ 3 \\ \hline 120 \end{array}$$

$$5 \text{ to } 7 = 50 \times 3 = 150$$

$$\begin{array}{r} 150 \\ 120 \\ \hline 270 \\ 45 \\ \hline 315 \end{array}$$

$$\cancel{120} \Rightarrow 315 - 270 = 45$$

Ams $\boxed{= 45}$

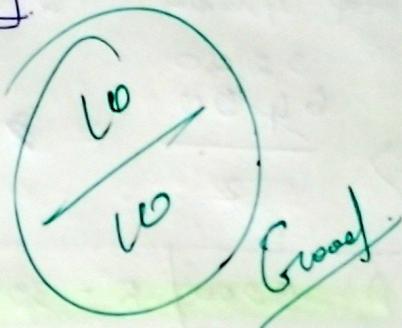
(10.) A batsman scores runs in such a way that his average after 25 innings is 48. If he scores 72 runs in the next inning, find his new average?

$$1 + 25 = 48 \times 25 = 1200$$

$$\Rightarrow 26 = 1200 + 72 = 1272$$

$$\begin{array}{r} 48.92 \\ 1272 \\ \hline 26 \\ 26 \\ \hline 12 \\ 12 \\ \hline 0 \end{array} = \boxed{48.92}$$

$$\begin{array}{r} ① \\ 4 \\ 48 \\ \hline 25 \\ 24 \\ \hline 96 \\ 96 \\ \hline 0 \end{array} \quad \text{1200}$$



$$\begin{array}{r} 127 \\ 104 \\ \hline 23 \\ 1 \\ 26 \\ 26 \\ \hline 52 \\ 26 \\ \hline 28 \\ 26 \\ \hline 104 \\ 104 \\ \hline 26 \\ 26 \\ \hline 130 \\ 212 \\ 258 \\ \hline 208 \\ 24 \\ \hline 182 \\ 182 \\ \hline 26 \\ 26 \\ \hline 268 \\ 26 \\ \hline 234 \\ 234 \\ \hline 06 \\ 26 \\ \hline 260 \end{array}$$