

1) vijay expenditure for first 3 days is Rs 100, 3rd days average is 90

$$\text{Avg} = \frac{310 + ?}{4} = 90 = \frac{310 + ?}{4} \quad ? = 50$$

2) what will be average price of all goods bought by Ajay
 30 papers for 3 each, 33 chocolates for 10 each, 25 clips for 4 each

$$T = 30 + 3 \text{ srs} = 90 \text{ goods}$$

$$\frac{3(30) + 35(10) + 15(25)}{90} = \frac{500}{90} = 6.4$$

3) out of 20 cycles sold by Ajay, average cost of 11 cycles is Rs 18000. In total he earned Rs 300000. what was average of price?

$$S = AV \times T = 18000 \times 11 = 216000$$

12 cycles	= 216000	18000 x 11
20 cycles	= 300000	216000
8 cycles	= 84000	

$$\text{Avg} = \frac{S}{T} = \frac{84000}{8} = 10500$$

4) without considering the salary of the boss the average salary reduces by 1000. what will be salary of boss if avg salary of 11 employees is Rs 10000

$$\text{Avg} = \frac{S}{7} \quad S = \text{Avg} \times 7$$

$$S = 18000 \times 12 \quad S = 216000$$

$$A_{11} = 17000$$

$$S = 17000 \times 11 = 187000$$

$$216000 - 187000 = 29000 \text{ less salary}$$

- 5) Average age of 5 people is 47 yrs. Another group has 8 people who have average of 61 years. when both groups are mixed what is average of all people

$$A = \frac{S}{7} = \text{Total} = 5 \times 8 = 13 \quad \text{Avg} = \frac{S}{7} \quad S = 47 \times 5 = 235$$

$$\text{Avg} = \frac{S_8}{7} = S_8 = 640 \text{ year}$$

$$\text{Total} = \frac{210 \text{ years} + 640}{13} = 66 \text{ years}$$

- 6) 5 boxes have some average weight. when one box which weighs 89 kg is replaced by another box, the average weight increases by 5 kg. how much the new box weighs

$$W W W \rightarrow \boxed{} \rightarrow W + S \quad / \quad W + S \rightarrow W + S$$

The new box should compensate all value

$$89 + 5 \times 5 = 103 \text{ kg}$$

7) How old will Pappu be if ratio of his age and one of his twin grandsons is 11:2 and avg age and his both grandsons is 50.

$$A_v = \frac{S}{7} = S_0 = \frac{S_2}{3} = 150 \text{ yrs} \quad R.G = 11:2 \quad 11K:2K$$

$$15K = 150 \text{ yrs} : K = 10 \text{ yrs} = K = 110 \text{ years}$$

8) Had Ajay Scored 18 runs more in his 3rd innings and 4 runs more in his 7th innings, his average would have become 66 runs. But it is 64 runs. How many innings did he play

$$64 \xrightarrow{2+2+18+4} 66$$

$$N \times 2 = 2N \quad - \text{Com Perative}$$

$$2N = 22$$

$$N = 11 \text{ innings}$$

9) In a group of people, the oldest and youngest have an age difference of 100 years. If these two are left out of counting, then average age of remaining 40 people is 28. The average age of entire group being 30. How old is eldest?

$$40 + Y + 0 = 42$$

$$28 = \frac{S_{40}}{40}$$

$$2N = 40 \quad N = 20 \text{ yrs}$$

$$100 + N = 120 \text{ old}$$

$$30 = \frac{S_{42}}{42} = S_{41} = 1260$$

$$S_{40} = 1120$$

$$Y + 0 + 40$$

$$N + 100 + N + 1120 = 1260 \quad 2N = 1260 - 1120 = 140$$

- 10) A batsman played 11 innings and has a certain average. This average increases by 1 run when his innings of 32 runs, 33 runs, 34 runs are replaced by 3 other innings. Find 3 innings are

$$2 \times 11 = 22$$

$$\text{Avg} = \frac{121}{11}$$

$$3N = 32 + 33 + 34 + 22$$

$$\text{Avg} = 40 \frac{1}{3} \text{ runs}$$

$$3N = 121$$

Chain rule

- 1) 40 boys paint a house in 96 days by working 9 hours per day. How many hours per day 48 boys need to work so they can paint the house in 45 days

$$40 B \times 96 D \times 9 \text{ hours} \times 1 = 48 B \times 45 D \times ? \times 1$$