

10. 24

① Rohit's average Score

$$\text{Total} = 70 + 75 + 80 = 225$$

$$\text{Avg Score} = \frac{\text{Total}}{\text{No of tests}} = \frac{225}{3} \\ = \underline{\underline{75}}$$

②

$$\text{Total age} = 10 + 12 + 14 + 16 + 18 = 70$$

$$\text{Avg age} = \frac{70}{5} = \underline{\underline{14}}$$

③ Total weight

$$\text{Avg} = 10 \text{ kg}$$

$$\text{Total} = \text{Avg} * \text{No of box} = 10 * 5 = \underline{\underline{50 \text{ kg}}}$$

④ Mental work

$$\text{Hours per day} = 2$$

$$\text{Total} = 5$$

$$\text{Total hrs} = 2 * 5 = \underline{\underline{10 \text{ hrs}}}$$

⑤ work done by machine in 1 hr

$$\text{Total work} = 1 \text{ task}$$

$$\text{Total taken} = 4 \text{ hours}$$

$$\text{work done in 1 hour} = \frac{\text{Total work}}{\text{Time taken}} \\ = \frac{1}{4} = \underline{\underline{0.25 \text{ tasks}}}$$

6. work done by person in 2 hrs

$$\text{Total work} = 1 \text{ wall}$$

$$\text{Time taken} = 3 \text{ hrs}$$

$$\text{work done in 1 hr} = \text{Total}/\text{Time} = 1/3$$

$$\text{work done in 2 hrs} = 1/3 * 2 = \underline{\underline{2/3}}$$

7. work done by 1 worker in a day

$$\text{Total work} = 1 \text{ job}$$

$$\text{Number of workers} = 6$$

$$\text{Time taken} = 8 \text{ days}$$

$$6 \text{ workers} = \text{Total work} / \text{Time taken} = 1/8$$

$$1 \text{ worker} = (1/8) / 6 = \underline{\underline{1/48}}$$

8. Sum of 6 No:

$$\text{Avg} = 15$$

$$\text{Sum} = \text{Avg} * \text{No of element} = 15 * 9 = \underline{\underline{90}}$$

9. total scope of cricket players

$$\text{Avg Score} = 50$$

$$\text{No of Mathes} = 4$$

$$\text{Total Scope} = \text{Avg Score} * \text{No of Mathes}$$

$$50 * 4 = 20$$

$$50 \div 4 = 20$$

10 Days taken by 2 workers

4 workers take 12 days

Total work = $4 \times 12 = 48$ worker-days

Days taken by 2 workers =

$$48 \div 2 = 24 \text{ days}$$

11. Days taken by 10 workers

4 workers takes 10 days

Total work = $4 \times 10 = 40$ worker-days

Days taken = Total work / no of workers

$$= 40 \div 10$$

$$= 4 \text{ days}$$

12. Days by A

A & B together

A alone takes 20 days

$$\text{LCM}(12, 20) = 60 \text{ unit}$$

$$60 \div 12 = 5 \text{ unit}$$

work by A in day = 3 unit

$$60 \div 2 = \frac{30}{5} \text{ days}$$

$$11. 6000 \rightarrow 2 \text{ Sena}$$

$$12 \quad 8 \quad 15$$

Share of each

$$\text{ager} \rightarrow 10:15$$

$$\text{Sahio} \rightarrow 4:5$$

$$\text{Total} = 4+8=9$$

$$6000/9 = 666.67$$

$$\text{Sen 1} \Rightarrow 4 \times 666.67 = 2666.68$$

$$\text{Sen 2} \Rightarrow 5 \times 666.67 = 3333.35$$

$$\boxed{\text{Sen 1} = 2666.68}$$

$$\boxed{\text{Sen 2} = 3333.35}$$

$$\textcircled{12} \quad \text{Total} \Rightarrow 3+2+1=6$$

$$\text{Almond/part} \Rightarrow 12000 \xrightarrow{3000} / 6, > 2000$$

$$\text{A's} = 3 \times 2000 = 6000$$

$$\text{B's} = 2 \times 2000 = 4000$$

$$\text{C's} = 1 \times 2000 = 2000$$

$$\textcircled{13} \quad \text{Ratio} = 7:3,$$

$$\text{Total} = 10$$

$$\text{Milk} = \frac{7}{10} \times 10 = 7$$

$$\textcircled{14} \quad \text{Ratio} \propto 1:4:1:2$$

$$5:6:7$$

where

$$y = 260000$$

$$z = 7/6 \times 260000$$

$$c = 70000$$

$$y = \text{£}60,000$$

$$2 = 7/6 \times 60,000$$

$$= \text{£}70,000$$

(15)

Speed ratio - 5:4

1st person distance - 18 km

2nd person distance

$$= (4/3) \times 18$$

$$= 24 \text{ km}$$

(16) 60% alcohol \rightarrow 40% water is 52
 $\Rightarrow 2 \text{ L water}$

want 50% water \rightarrow add x L water
 $\rightarrow (2+x)/5(x) = 0.5$

$$\boxed{x = 1. \text{ L}}$$

(17) Ratio $= 5000 \times 6 : 3000 \times 6$

$$= 30000 : 18000 = 5 : 3$$

$$= 2400 \times (5/8) = \text{£}1500 \notin 2400 \text{ k}(7/1)$$
$$= \underline{\underline{\notin 900}}$$

$$A = 1500$$

$$B = \underline{\underline{\notin 900}}$$

(18) A: $\text{£}6000 \times 12$ B: $\text{£}9000 \times 12$

$$C: \text{£}3000 \times 8 = 72000$$

$$108000 : 94000 = 6 : 9 : 2$$

Total = 17 parts \rightarrow C's share = $(2/17)$

$$B = \text{£}3000 \times 18000$$

$$= \underline{\underline{\notin 211.76}}$$

13 painting a house.

$$\text{LCM}(15, 20) = 60 \text{ unit}$$

15 days his rate = $60/15 = 4 \text{ unit/day}$

20 days his rate = $60/20 = 3 \text{ unit/day}$

Combined rate is $4+3 = 7 \text{ unit/day}$

= Total work / Combined rate =

$$60/7 = \underline{\underline{60/7 \text{ days}}}$$

14.

Removed Number

denote the sum of 5 numbers as S

The avg is 20, so $8/5 = 20$

$$S = 100$$

The removed number is $S - S' = 100$

$$100 - 72 =$$

$$\underline{\underline{28}}$$

15. New average weight

10 student weight $30 * 10 = 300 \text{ kg}$

The 2 student weight $25 + 35 = 60 \text{ kg}$

remaining 8 student $300 - 60 = 240 \text{ kg}$

The 2 student weight $25 + 35 = 60 \text{ kg}$

remaining 8 student sum - 60 = 240 kg

The new avg weight is $240/8$
 $= \underline{\underline{30 \text{ kg}}}$

16. Time taken working together
work = LCM(6, 8, 12) = 24 unit

$$p_1 = 24/6 = 4 \text{ unit/day}$$

$$p_2 = 24/8 = 3 \text{ unit/day}$$

$$p_3 = 24/12 = 2 \text{ unit/day}$$

$$4 + 3 + 2 = 9 \text{ unit/day}$$

$$\frac{8}{3} \text{ days}$$

17. New avg

The sum of 8 NO = $35 * 8 = 280$

3 addition number is $40 + 45 + 50$
 $= 135$

$$280 + 135 = 415$$

The new avg is $415/11 = \underline{\underline{37.73}}$

23. New avg.

$$50 * 10 = 500$$

I increase by 20. another decrease
by 10 the net change is $20 - 10$
 $= 10$

$$500 + 10 = \cancel{50} 510$$

$$510 / 10 = \underline{\underline{51}}$$

24. LCM (8, 12) = 24 hrs

pipe filling the tank $\frac{24}{8}$
pipe emptying $= 3 \text{ unit/hr}$
 $= 24 / 12 = 2 \text{ unit/hr}$

net rate is $3 - 2 = 1 \text{ unit/hr}$

Time taken to fill the tank =

$$24 / 1 = 24 \text{ hours}$$

25. work remaining.

Q5. work remaining.

$$A = 1/10$$

$$B = 1/15$$

$$C = 1/20$$

$$\begin{aligned} \text{The combined rate} &= (6+4+3)/60 \\ &= 13/60 \end{aligned}$$

$$\begin{aligned} \text{work done in 4 days} &= 4 * (13/60) \\ &= \underline{\underline{52/160}} \end{aligned}$$