27/6/2025

Day 4 Aptitude
Average & Time and Work.

1) Rohit score = 70, 75, 80 marks in 3 test.

Average = $\frac{70+75+80}{3} = \frac{225}{3} = 75$

2) 5 friends ages = 10, 12, 14, 16, 18.

Average = $\frac{10+12+14+16+18}{5} = \frac{70}{5} = 14$

3) Average weight of 5 boxes is 10kg.

total weight = $10 \times 5 = 50$ kg

4) Meera work 2hours per day for 5 days.

Total hours = 2 hr/day $\times$ 5 day = 10 hours

5) Machine completes task in 4hours. finish in 1hour

work done per hour = $\frac{1}{4} = 0.25$

6) person paints a wall in 3hours. How much he paint in 2hrs

work per hour = $\frac{1}{3}$

2 hrs = $2 \times \frac{1}{3} = \frac{2}{3}$ of wall

7) 6 workers finish job in 8 days. How much work done by 1 worker in a day.

Total work = $6 \times 8 = 48$ worker-days

1 worker = $\frac{1}{48}$ of work

8) Avg 6 no's in 15

Sum = Avg × items

= 6 × 15 = 90

9) Avg score of cricket player in 4 matches is 50

Total Score = 50 × 4 = 200

10) 4 workers finish a job in 12 days. how many days 2 workers take.

Total work = 4 × 12 = 48 worker days

2 worker = $\frac{48}{2}$ = 24 days

11) team of 5 workers can build wall in 10 days. How many days will 10 workers take.

Total work = 5 × 10 = 50

10 workers = $\frac{50}{10}$ = 5 days

12) 5 workers ~~build wall~~ in ~~10~~ day.

A & B together work 12 days. A alone can do it in 20 days. How long B take.

Total work = LCM (12, 20) = 60

A' rate = $\frac{60}{20}$ = 3 units/day

A+B = $\frac{60}{12}$ = 5 units / day

B rate = 5 - 3 = 2 unit

B take = $\frac{60}{2}$ = 30 days //

13. Man paint a house 15 days, son in 20 days. How long take working toge.

Man = 1/15

Son = 1/20

Together = $\left(\frac{1}{15}+\frac{1}{20}\right) = \frac{(4+3)}{60} = \frac{7}{60}$

Time = 60/7 = 8.57 days

14. Avg of 5 numbers is 20. One no's removed, Avg becomes 18. Find removed no

Sum of 5 no = 5 × 20 = 100

5 − 1 = 4 ⇒ 4 × 18 = 72

Removed no = 100 − 72 = **28**

15. Avg weight 10 students = 30 kg.

2 students weight 25 kg, 35 kg.

Total weight = 10 × 30 = 300 kg

weight left = 300 − (25 + 35) = 300 − 60 = 240

New avg = $\frac{240}{8}$ = **30 kg**

16. 3 people work 6, 8, 12 days. How long take working together

1st − 1/6

2nd = 1/8

3rd = 1/12

Sum = LCM of 6, 8, 12 = 24

$\frac{\frac{1}{6}\times 24 + \frac{1}{8}\times 24 + \frac{1}{12}\times 24}{24} = \frac{4+3+2}{24} = \frac{9}{24} = \frac{3}{8}$

2 | 6, 8, 12

2 | 3, 4, 6

3 | 3, 2, 3

1, 2, 1

17. Avg 8 no = 35 ⇒ 8 × 35 = 280

3 no = 40 + 45 + 50 = 135

Sum = 280 + 135 = 415

Avg = 415/11 = 37.73

Avg 8 + 3 = 11

18) Total = $10 \times 25 = 250$

Avg 10 & 1 = 91

sum = $250 - 40 = 210$.

Avg = $\frac{210}{9} = 23.33$

19) A & B work 15 & 20 day

A stmb work for 5 day.

A's 1 day work = $1/15$

5 days, A doeg = $5/15 = 1/3$

work left = $1 - 1/3 = \boxed{\frac{2}{3}}$

20) Total = $7 \times 30 = 210$

Rem sum = $210 - 42 = 168$.

Avg = $\frac{168}{6} = \boxed{28}$

21) A work = 24 day = $1/24$

B work = 30 day = $1/30$

C work = 40 days = $1/40$

LCM = 120

A's = 5, B = 4, C = 3

total per day = $\frac{(5+4+3)}{120} = \frac{12}{120} = 1/10$.

5 days = $5 \times 1/10 = 1/2$

work left = $1 - 1/2 = 1/2$ //.

2	24, 30, 40
2	12, 15, 20
2	6, 15, 10
3	3, 15, 5
5	1, 5, 5
	1, 1, 1

23) change = $20 - 10 = 10$.

sum = $10 \times 50 + 10 = 510$.

Avg = $\frac{510}{10} = \boxed{51}$

24) filling = 1/8

emptying = 1/12

rate = $(\frac{1}{8} - \frac{1}{12}) = \frac{3-2}{24} = \frac{1}{24}$

Time = $1 / (\frac{1}{24})$ = 24 hours

2 | 12, 8
2 | 6, 4
3, 2

25) A = 1/10 B = 1/15 C = 1/20

LCM = 60

per day = $\frac{(6+4+3)}{60} = 13/60$

4 day = $4 \times \frac{13}{60} = \frac{52}{60} = \frac{13}{15}$

work left = $1 - \frac{13}{15} = \frac{2}{15}$

5 | 10, 15, 20
2 | 2, 3, 4
1, 3, 2

22) A + B = 1/10

B = 1/15.

A = (A+B) − B = $(\frac{1}{10}) - \frac{1}{15}$

A = $\frac{3-2}{30} = \frac{1}{30}$

5 | 10, 15
2, 3

A work for x days = 1

A & B work together = 12 − x

A's work = $x \times \frac{1}{30}$

(A+B)'s work = $(12-x) \times 1/10$

Total work = 1

$\frac{x}{30} + \frac{12-x}{10} = 1$

10 | 30, 10
3, 1

$x + 36 - 3x = 30$

$\frac{12-x}{10} \times \frac{3}{30}$

$6 = 2x$

$3 = x$