

General Science & Ability

Section - II

Q.6 a) Identify the series.

→ 4, 18, 100, —, 294
 Ans. a b c d e
 4, 18, 100, —, 294
 14 82 150
 x y z m

$b - a = x, c - b = y, d - c = z, e - d = m$
 $18 - 4 = 14, 100 - 18 = 82,$

$4, 18, 100, 180, 294$
 $2^3 - 2^2, 3^3 - 3^2, 5^3 - 5^2, 6^3 - 6^2, 7^3 - 7^2$
 $8 - 4, 27 - 9, 125 - 25, 216 - 36, 343 - 49$
 $= 180$

Missing no in series is 180.

(b) Tahir Capital = 15,000
 after 5 month.
 Umer invested = 30,000
 Usman invested after 8th month
 = 45,000

Profit in one year = 406,000
 share of each = ?

Sol.

Total investment of Tahir = 15000×12
 $= 180000 / \text{Rs in year}$
 " " of Umer = $30000 \times 7 = 210000 /$
 in year
 " " of Usman = 45000×4
 $= 180000 / \text{Rs in year}$

Therefore profit share at the end of year in ratio of.

$$180000 : 210000 : 180000$$

$$\Rightarrow 18 : 21 : 18$$

$$\Rightarrow 6 : 7 : 6$$

$$\text{Total share} = 6 + 7 + 6 = 19$$

$$\text{Profit earned in year} = 406,000/\text{Rs}$$

$$\text{Share of Tahir} = \frac{\text{Profit earned}}{\text{Total share}} \times \text{Tahir share}$$

$$= \frac{406,000}{19} \times 6 = 128210.5 \text{Rs}$$

$$\text{Share of Umer} = \frac{406000}{19} \times 7 = 149579 \text{Rs}$$

$$\text{Usman} = \frac{406000}{19} \times 6 = 128210.5 \text{Rs}$$

(c) Brother \leftarrow Q D G S N Q A \rightarrow
Sister = ?

2	18	15	20	8	5	18	
Brother							Sister
15	14	8	11	12	17		
Q D G S N Q A							Q D S R H R
17	4	7	19	14	17	1	

Sister = Q D S R H R.



(d) Track length = 2000 meters
CSS Aspirant covers 25%.
Track left to covered = ?

Sol. Aspirant covers = $\frac{2000}{100} \times 25$
 $= 500 \text{m}$

$$\text{Total length} - \text{Aspirant} = 2000 - 500 = 1500 \text{m}$$

So

Track left to covered = 1500 m.
which is 75% of 2000 m.



Q.8

(a)

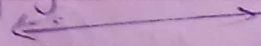
Ans

3 rows and 3 columns. in
the figure
Using formula

$$= n^2 + (n-1)^2 + (n-2)^2 + \dots + (n-n)^2$$

$$= 3^2 + 2^2 + 1^2 = 9 + 4 + 1 = 14$$

So there is 14 squares in the
given figure.



b)

Ans

Arithmetic mean of 14 observation

26, 12, 14, 15, x, 17, 9, 11, 18, 16, 28, 20, 22

8 is 17.

Missing observation = ? = x

we know that

$$\text{Arithmetic mean} = \frac{\text{Sum of obs}}{\text{Total no. obs}}$$

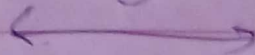
$$17 = \frac{216 + x}{14}$$

$$17 \times 14 = 216 + x$$

$$238 - 216 = x$$

$$x = 22 \text{ Ans.}$$

Therefore missing obs is 22.



(c)

Ans.

Let

$x = \text{kg of laddoo}$

$y = \text{kg of barfi}$

Now equation

$$4x + 6y = 260 \quad \text{--- (1)}$$

$$2x + 4y = 160 \quad \text{--- (2)}$$

Solving eq.

Multiply eq 2 by 2

$$4x + 8y = 320 \quad \text{--- (3)}$$

$$- \underline{4x + 6y = 260} \quad \text{--- (2)}$$

$$2y = 80$$

$$y = \frac{80}{2} = 40$$

putting in (1)

$$4x + 6(40) = 260$$

$$4x + 240 = 260$$

$$4x = 260 - 240$$

$$x = \frac{20}{4} = 5$$

$$x = 5$$

So $x = 5, y = 40$.

ingredient req. 5kg & 40kg.

