

DATE: ___/___/___

Solution:

(A)

let the total matches be x

won matches = 60%

lost matches = 24

percentage of lost matches =

$$100\% - 60\% = 40\%$$

Now according to percentage formula

$$x \times \frac{40}{100} = 24$$

$$x = 24 \times \frac{10}{4}$$

$$x = 60$$

Hence total number of matches played is **60**.

(B)

Solution:

persons	kg sugar	Days
↓ 30	↑ 40	↑ 10
↓ 80	↑ 320	↑ x

↓ 30
↓ 80

↑ 40
↑ 320

↑ 10
↑ x

$$\frac{x}{10} = \frac{30}{80} \times \frac{320}{40} = \frac{12x}{4}$$

$$\frac{x}{10} = 3 \Rightarrow x = 10 \times 3$$

$$x = 30$$

Hence 30 days

Solution

Let the parts as
A, B, and C.

Then their ratios can be
given as

$$A \quad B \quad C$$

$$3 : \frac{1}{4}(5) : 5$$

by simplifying

$$3 : \frac{5}{4} : 5$$

for sum of ratios we
add these ratios

$$\frac{3}{1} + \frac{5}{4} + \frac{5}{1} =$$

$$\frac{12 + 5 + 20}{4} = \frac{37}{4}$$

Now for part of A

$$\frac{3 \times 4}{37} \times 370 \Rightarrow \frac{12}{37} \times 370$$

$$A = 120$$

For part of B ~~here~~

$$\frac{5}{4} \div \frac{37}{4} \times 370$$

$$\frac{5}{4} \times \frac{4}{37} \times 370$$

$$B = 50$$

Now for C

$$\frac{5(4)}{37} \times 370$$

$$\frac{20}{37} \times 370$$

$$B = 200$$

Hence, $A = 120$

$$B = 50$$

$$C = 200$$

(d)

Solution:

$$\text{Total numbers} = 6$$

$$\text{Mean} = 20$$

Sum of the numbers

According to average (Mean) formula.

$$\text{Mean} = \frac{\text{Sum of all } \overset{\text{Observation}}{\text{numbers}}}{\text{Number of Observations}}$$

Now we know that

$$20 = \frac{x}{6}$$

$$20 \times 6 = x$$

$$120 = x$$

Now if we remove one number, the mean is 15

$$15 = \frac{120 - x}{5}$$

$$15 \times 5 = 120 - x$$

$$75 = 120 - x$$

$$x = 120 - 75$$

$$x = 45$$

Hence the number removed is 45