

Date: _____

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Q.1a)

Matches won = 60%

No. of matches lost = 24

Total No. of matches = ?
played

Solution:

Let total no. of matches = x

$$40\% \text{ of } x = 24$$

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

$$\frac{2x}{5} = 24$$

$$x = \frac{24 \times 5}{2}$$

$$x = 60$$

b)

Person : Sugar(kg) : Days

30 ↓ : 40 kg ↑ : 10 ↑

80 ↓ : 320 kg ↑ : x ↑

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

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

$$x = 30 \text{ days}$$

c- Divide 370\$ into 3 parts

$$\text{1st part} = 3x$$

$$\text{2nd part} = y$$

$$\text{3rd part} = 5x$$

$$\text{We know that } y = \frac{1}{4}(5x)$$

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

$$= \text{1st} : \text{3rd}$$

$$= 3x : 5x = 3 : 5$$

$$= \frac{3}{8} : \frac{5}{8}$$

$$= \frac{3}{8}(370) : \frac{5}{8}(370)$$

$$= 138.75 : 231.25$$

$$\text{Sum of 1st and 3rd} = 138.75 + 231.25$$

$$= 370$$

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$$\text{2nd part} = \frac{5 \times 231 \cdot 25}{4 \cdot 5}$$

$$y = 57.81$$

d. Arithmetic mean of 6 numbers = 20
Mean of 5 numbers = 15
Number that was removed = ?

Solution:

$$\Rightarrow \text{Sum of 6 numbers} = \text{Average} \times \text{Total numbers}$$

$$\text{Sum} = 20 \times 6$$

$$\text{Sum} = 120 \quad \text{--- (1)}$$

$$\Rightarrow \text{Sum of 5 numbers} = \text{Average} \times \text{Total numbers}$$

$$\text{Sum} = 15 \times 5$$

$$\text{Sum} = 75 \quad \text{--- (2)}$$

\Rightarrow Subtract eqn. 2 from 1

$$120 - 75 = 45$$

$$\boxed{\text{Removed number} = 45}$$

Q.2

a) Computer Buses:-

A bus in computers is a digital pathway that connects components of the computer.

Early in computer development, components were connected by cables and bundles which make up a bus in electrical terms.

Types of Computer Buses

Computer buses include three types of system buses:

the Address Bus, The Data Bus and The Control Bus.

These buses provide the address or location, information, the data and the computers timing to ensure a good data transfer.

CPU as Brain of Computer

The central processing unit (CPU) of a computer is the computer's brain.

Like human brain, the primary responsibility of a CPU is to execute ~~instructions~~^{instructions}. The instructions that our brain receives take the form of sensory input. While the instructions that our CPU receives is often referred to as Assembly Language.

Similarly a brain has different regions that handle different responsibilities, a CPU has two main components known as the Control Unit (CU) and the Arithmetic and Logical Unit.