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## Section - II

Q. 6(a)

Solution:  $\begin{matrix} \text{HTU} \\ \text{abc} \end{matrix}$

$$a + b + c = 15 \quad \text{--- (A)}$$

According to the given condition

$$b + c = 12 \quad \text{--- (1)}$$

$$\text{and } b - c = 2 \quad \text{--- (2)}$$

Add eq (1) & eq (2)

$$b + c = 12$$

$$\underline{b - c = 2}$$

$$2b = 14$$

$$b = 14/2$$

$$\boxed{b = 7}$$

put value of b in eq (1) to find c

$$7 + c = 12$$

$$c = 12 - 7$$

$$\boxed{c = 5}$$

Now put  $b = 7$  &  $c = 5$  in eq (A)

$$a + 7 + 5 = 15$$

$$a + 12 = 15$$

$$a = 15 - 12$$

$$\boxed{a = 3}$$

So the three digit number is 375

375

(Q6(b))

Given

Ratio of slices of small medium &amp; large pizza =

2:3:4

weight of each slice = 40 gm

Price of smaller pizza = 320 Rs.

There are 18 person and one slice person so No of slice is = 18 slices

Required

Price of total pizza = ?

weight of total pizza = ?

Sol:

First find the number of slices in each pizza

Ratio is = 2:3:4

Sum of ratio = 2+3+4

= 9

So, slices in ~~Medium~~ <sup>small</sup> pizza =  $\frac{2}{9} \times 18$ 

= 2 x 2

= 4 slices

slices in medium pizza =  $\frac{3}{9} \times 18$ 

= 3 x 2

= 6 slices

slices in large pizza =  $\frac{4}{9} \times 18$ 

= 4 x 2

= 8 slices

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As The price of small pizza is 320

if means 4 slices = 320

$$1 \text{ slice} = \frac{320}{4}$$

$$1 \text{ slice} = 80 \text{ Rs}$$

Now He price of total pizza mean

18 slices

$$18 \text{ slices} = 80 \times 18$$

$$18 \text{ slice} = 1440 \text{ Rs}$$

So price of total pizza is  $1440 \text{ Rs}$

Now find The total weight of pizza : \*

As given a one slice = 40 gm

so

$$18 \text{ slices} = 40 \times 18 \text{ gm}$$

$$= 720 \text{ gm}$$

So, The total weight of pizza is

$$\text{Total weight} = 720 \text{ gm}$$

## Section - II

### Q-6(C)

Given:

$$\text{Diameter} = d = 6 \text{ cm}$$

$$\text{Radius} = r = \frac{d}{2} = \frac{6}{2} \text{ cm}$$

$$r = 3 \text{ cm}$$

Required:

$$\text{Circumference of circle} = S = ?$$

$$\text{Area of circle} = A = ?$$

Solution:

The circumference of circle is

$$S = 2\pi r$$

$$= 2 \times 3.14 \times 3$$

$$= 6 \times 3.14$$

$$S = 18.84 \text{ cm}$$

~~The~~ and the area of circle is

$$A = \pi r^2$$

$$A = 3.14 \times 3^2$$

$$A = 3.14 \times 9$$

$$A = 28.26 \text{ cm}^2$$

## Section II

## Q 6 (d)

identify missing numbers.

i) 13, 24, 46, 90, 178, \_\_\_\_\_.

ii) 5, 6, 9, 14, 21, \_\_\_\_\_.

① 13, 24, 46, 90, 178, \_\_\_\_\_.

In this series each term is obtained by multiplying the previous number with 2 and then subtract 2.

$$\text{So } 178 \times 2 = 356$$

and now subtract 2

$$\text{So } 356 - 2 = 354$$

Thus, the missing number is 354

$$13, 24, 46, 90, 178, 354$$

② 5, 6, 9, 14, 21, \_\_\_\_\_.

In the given series an increasing odd number is adding to previous term.

$$5 + 1 = 6$$

$$6 + 3 = 9$$

$$9 + 5 = 14$$

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$$14 + 7 = 21$$

The next odd number is 9 so:

$$21 + 9 = 30$$

so the missing number is 30

$$5, 6, 9, 14, 21, 30$$

Q 8 (a)

Given:

$$\text{length} = l = 15 \text{ ft}$$

$$\text{width of room} = w = 60\% \text{ of length}$$

Required:

$$\text{Dimensions of room} = ?$$

Sol:

$$\text{find width} = w = 60\% \text{ of length}$$

$$= \frac{60}{100} \times 15$$

$$= 6 \times \frac{3}{5}$$

$$= \frac{36}{5} \times 3$$

$$= \frac{7}{3 \times 3}$$

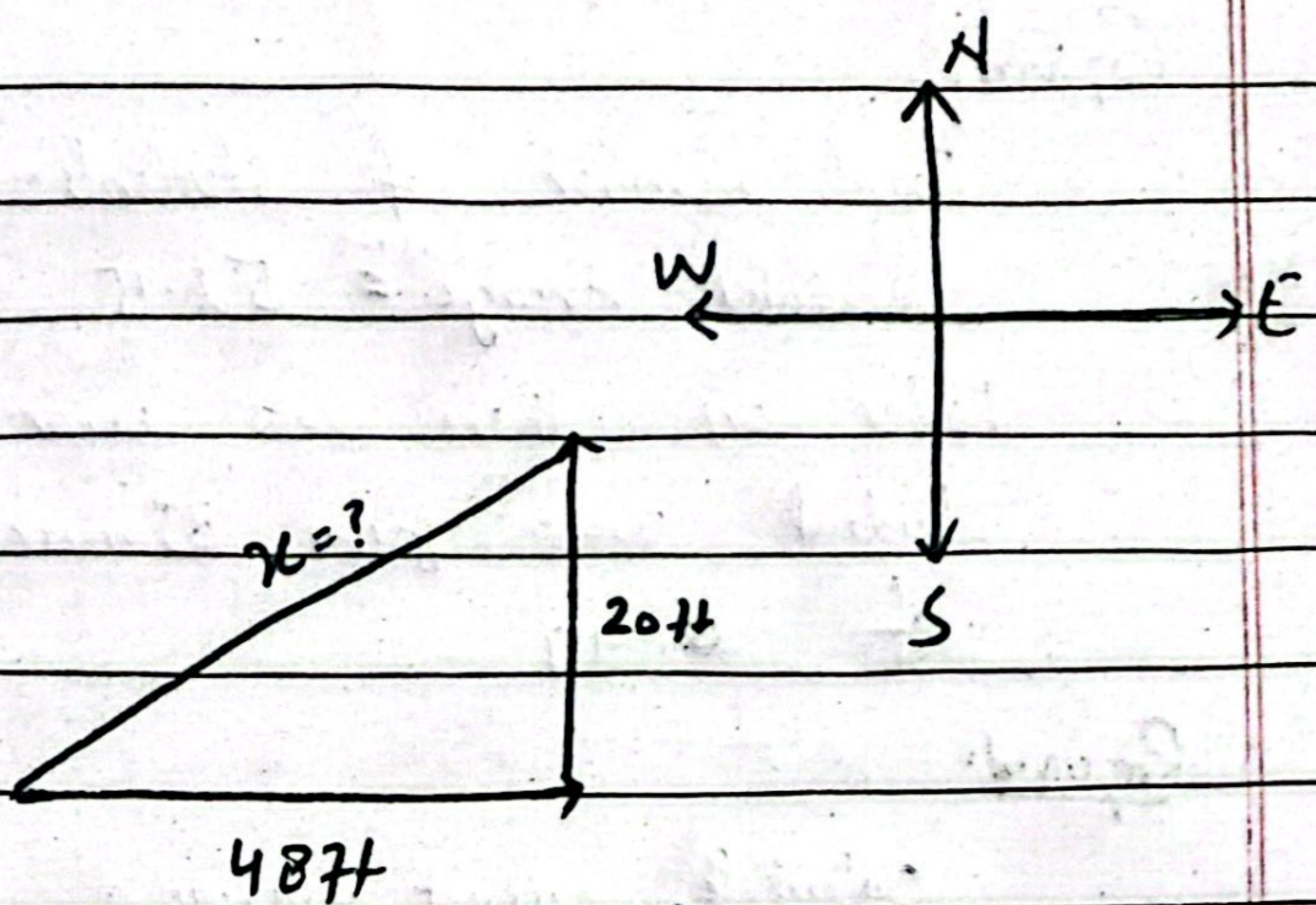
$$= 9 \text{ ft}$$

So Dimensions are

$$\text{length} = l = 15 \text{ ft}$$

$$\text{width} = w = 9 \text{ ft}$$

Q8(b)



Use Pythagoras theorem to find the  
~~5 ft~~ Hypotenous (straight line distance) =  $x =$

$$H^2 = B^2 + P^2$$

$$x^2 = 48^2 + 20^2$$

$$x^2 = 2304 + 400$$

$$x^2 = 2704$$

take square root on both

$$\sqrt{x^2} = \sqrt{2704}$$

$$x = 52 \text{ ft}$$

she would have to run 52 ft

5)

Q8(c)

Given:

Total number of students = 40

Calculated Average <sup>marks</sup> = 52.15

Later on there was error a student were given 85 mark instead of 49

Required:

Calculate, correct average =

Sol:

At first Average marks were

$$\bar{X}_1 = \frac{\text{total marks}}{\text{total number of student}}$$

$$\bar{X}_1 = 52.15 = \frac{\text{total marks}}{40}$$

$$\text{total marks} = 52.15 \times 40$$

$$\text{total marks} = 2086$$

As given there was mistake 85 mark were given instead of 49.

So, the difference is

$$\begin{aligned} \text{difference} &= \cancel{89} - 85 \\ &= 85 - 49 \\ &= 36 \end{aligned}$$

It means 36 marks were added



extra in total marks so subtract  
it from total marks to find  
the correct average.

$$\text{Total marks} = 2086$$

After correction:

$$\begin{aligned} \text{total marks} &= 2086 - 36 \\ &= 2050 \end{aligned}$$

Now correct average is

$$\bar{X}_2 = \frac{\text{total marks}}{\text{total no. of students}}$$

$$\bar{X}_2 = \frac{2050}{40}$$

$$\boxed{\bar{X}_2 = 51.25}$$

So, 51.25 is the average marks of  
the class.

## Section I

### Q 2 (a)

#### Lipids:

These are organic compound insoluble in water but soluble in organic compounds.

↳ They are commonly known as oils and fats. They are ester of long chain of fatty acids and alcohol.

#### Types

**Simple Lipids:** → Also known as triglycerides.

They produce fatty acids and alcohol upon hydrolysis.

**Examples:**

Fats, oils, waxes.

#### Complex Lipids:

These lipids which produce fatty acids, alcohol and some other substances upon

hydrolysis are known as complex lipids

Examples:

Phospholipids, glycolipids etc.

Function:

- ① Simple lipids or triglycerides serve as reserve energy of the body
- ② They serve as a source for fat soluble vitamins like A, D, E and K
- ③ protect vital organs like heart and kidney
- ④ Layer of fat provide insulation and protection from cold.

Q2 (b)

Measure for energy conservation and Sustainable use:

① ↑ Efficient appliance:

people should use those appliances which

less amount of energy and whose output is comparable to the input they take.

### ② Renewable source:

People should opt renewable energy sources like solar and wind as they are available in abundant amount.

### ③ Promote public transportation:

Use of public transport should be promoted. It will ~~can~~ save energy use by the individual in his own private transport.

### ④ Electric Vehicles:

Electric vehicles should be introduced instead of fuel vehicle running on fuel. It will also save the environment & save energy.

5) Public Awareness:

Public Awareness  
Campaigns should be launched to  
educate individual about the  
energy saving practices.