Section - II

QNo: 06

(a)

Solution:

Let's consider that the 3-digit number has following digits:

x, y, and z respectively.

Then, according to given information following equations can be drafted:

~~$z\,x + y =$~~

$$y + z = 12 \quad eq\ (i)$$
$$y - z = 2 \quad eq\ (ii)$$

Now we can solve for y and z by adding these two simultaneous equations.

$$
\begin{array}{rl}
 & y + z = 12 \\
+ & y - z = 2 \\
\hline
 & 2y = 14
\end{array}
$$

OR $y = 7$

$$\boxed{y = 7}$$

Now we will substitute value of y in equation (i) to get value of z.

$$y + z = 12$$
$$(7) + z = 12$$
OR
$$\boxed{z = 5}$$

we also know that sum of three digits is 15 and sum of two digits is twelve. So we can find third number easily by subtracting sum of two digits from total sum of digits as follows:

$$x + y + z = 15$$
$$\cancel{x} \; y + z = 12$$

$$x = 15 - 12 = 3$$

$$\boxed{x = 3}$$

Conclusion:

Therefore, three digits are as follows:

$x = 3$
$y = 7$
$z = 5$

QNo:06

(b)

Solution:

Price of Total Pizza:

To find total price of pizza, we need to know the price per slice of pizza. Because, weight of each slice is identical, so we are assuming that price of slices is same.

Before that we have to find ~~total no~~ number of slices in each pizza to extract price per slice. We can find it from ratio of slices given for three ~~3~~ types of burgers.

The ratio of slice is as follows:

2 : 3 : 4

Similarly, sum of total slices is 18, so we can constitute equation as follows:

$$2x + 3x + 4x = 18$$

$$9x = 18$$

OR $\boxed{x = 2}$

Therefore, number of slices in each pizza is as given below:

1. Small Pizza $= 2x = 2(2) = 4$
2. Medium Pizza $= 3x = 3(2) = 6$
3. Large Pizza $= 4x = 4(2) = 8$

The price of small pizza is 320 and number of slices it contains is four. Since, each slice has identical price, price per slice can be given by:

Price of one slice

$$= \frac{\text{Price of small pizza}}{\text{Number of slices}}$$

$$\text{Price} = \frac{320}{4} = 80$$

$$\boxed{\text{Price Per Slice} = 80}$$

Price of total pizza

$= \text{Price per slice} \times \text{Total Number of slices}$

$= 80 \times 18$

$= 1440$

$$\boxed{\text{Price of total Pizza} = 1440}$$

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Weight of Total Pizza :

Weight of total pizza

$= \text{weight per slice} \times \text{total number of slices}$

$= 40g \times 18$

$= 720g$

$$\boxed{\text{weight of total pizza} = 720 \text{ grams}}$$

QNo:06 :

(C)

Given data:

⇒ Diameter of circle = d = 6cm

⇒ Circumference of circle = ?

⇒ Area of circle = ?

Solution:

To find circumference and area of circle first we need to find radius of circle which can be given by following equation:

$$radius = d/2$$

$$radius = 6/2$$

$$\boxed{radius = r = 3}$$

circumference of circle:

$$\text{circumference of circle} = 2\pi r$$

$$= 2(3.14)(3)$$

$$= 18.857$$

$$\boxed{\text{Circumference} = 18.857 cm}$$

Area of circle:

$$\text{Area of circle} = \pi r^2$$

$$= 3.14 (3)^2$$

$$\boxed{\text{Area of circle} = 28.274 cm}$$

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QNo:08

(d) (i.) 13, 24, 46, 90, 178, 354

Missing number of series is 354. Each successive number is add 11, 22, 44, 88, 176 and so on.

(ii) 5, 6, 9, 14, 21, 30.

Missing number of series is 30. Each successive of ~~of~~ series is added with odd numbers starting from 1 and onwards.

QNo:08

(a)

Given data:

⇒ Length of classroom (L) = 15 ft
⇒ width (W) = 60 % of Length
⇒ Area = ?

Solution;

Because 60 % of length equal to width therefor width can be given as:

width = 60 % of 15
width = 9

Now, we can find area as follows:

Area = Length x width
= 15 x 9
= 135

$\boxed{\text{Area} = 135 \text{ ft}}$

Additionally, perimeter can be given as follows:

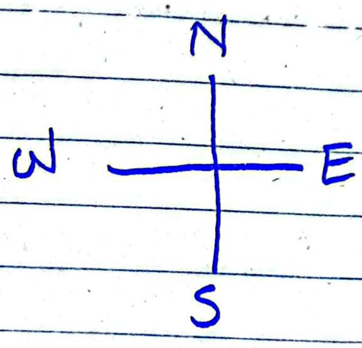
Perimeter = 2 (Length + width)
Perimeter = 2 (15 + 9)
= 48

$\boxed{\text{Perimeter} = 48 \text{ ft}}$

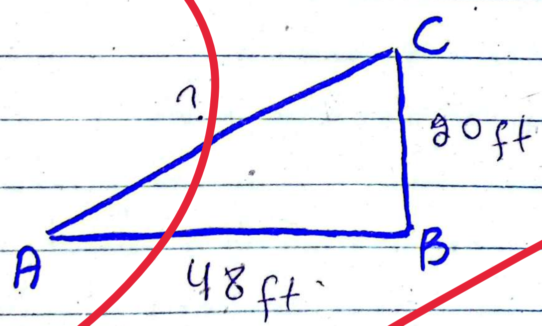
QNo:08

(b)

Solution:



Assume that she starts from point A, runs 48 ft toward point B, and then point C which is water station and her destination.



The straight path forms hypotenuse of triangle which can be found from pythagoras Theorem as follows:

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

Here $B = 48\,ft$, $P = 20\,ft$, $H = ?$

$$H^2 = 48^2 + 20^2$$

$$H = 52$$

$\boxed{\text{Straight path} = 52\,ft}$

QNo:08

(c)

Given information:

⇒ Number of students = 40

⇒ ~~Avg~~ Average before correction = 52.15

⇒ Sum of marks before correction = 2086

⇒ Average after correction = ??

Formula:

$$\text{Average} = \frac{\text{Sum of observations}}{\text{Number of observations}}$$

To rectify the error, we just need to add 49 and subtract 85 to get new sum and divide it by total number of students.

$$\text{Average} = \frac{2086+49-85}{40}$$

$$\boxed{\text{Average Marks} = 51.25}$$

Follow a step-by-step method to break down complex problems into manageable parts.

QNo:08

(d)

Given Data :

Total possible outcomes = 65
People who like veg. pizza = 37
People who like chicken Pizza = 25
People who like niether = 3

Formula :

$$\text{Probability} = \frac{\text{Favourable outcomes}}{\text{Total outcomes}}$$

$$\text{Probability} = \frac{25}{65}$$

$$\text{Probability} = 0.384$$

There is 0.384 probability that person randomly selected likes chicken pizza. OR 38.4% chances that randomly selected person will like ~~pizza~~ chicken pizza.