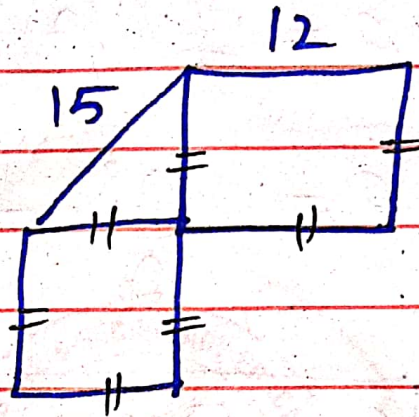


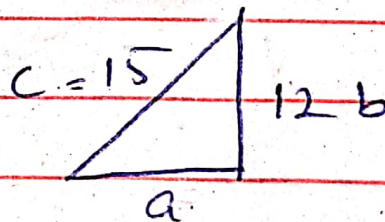
Section - II

Qno # 08 (c)



Solution

Apply Pythagoras Theorem
on Triangle



$$c^2 = a^2 + b^2$$

$$(15)^2 = a^2 + (12)^2$$

$$225 - 144 = a^2$$

$$a = 9$$

Now, area of triangle

$$a = \frac{1}{2}(bh)$$

$$a = \frac{1}{2}(12 \times 9)$$

$$a = \frac{108}{2} = 54 \text{ cm}^2$$

$$a = 54 \text{ cm}^2$$

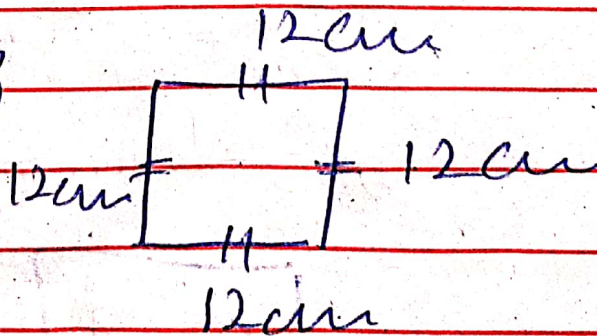
Perimeter of triangle

$$P = a + b + c$$

$$P = 9 + 12 + 15$$

$$P = 36 \text{ cm}$$

Area of



$a = \text{side} \times \text{side}$

$$a = 12 \times 12$$

$$a_2 = 144 \text{ cm}^2$$

Perimeter

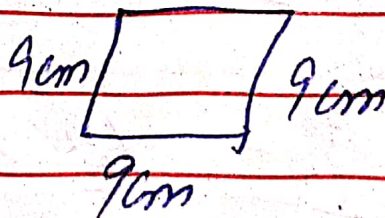
$$P = 2(\text{length} + \text{width})$$

$$P = 2(12 + 12)$$

$$P = 2(24)$$

$$P_2 = 48$$

Now area of last square



$$a = 9 \times 9 = 81 \text{ cm}^2$$

$$a_3 = 81 \text{ cm}^2$$

$$P = 2(L + W)$$

$$P = 2(9 + 9)$$

$$P_3 = 36 \text{ cm}$$

Now, total area of figure

$$A_T = A_1 + A_2 + A_3$$

$$A_T = 54 + 144 + 81$$

$$A_T = 279 \text{ cm}^2$$

Total Perimeter of figure

$$P_T = P_1 + P_2 + P_3$$

$$P_T = 36 + 48 + 36$$

$$P_T = 120 \text{ cm}$$

Qno # 8(a)

Solution

The sequence of brother is changed in reverse direction along with reversing the alphabet with decreasing order as:

BROTHER is written

as:

QDGSNQA

So, SISTER is written

as;

QDGRHR

Q No # 8 (b)

Solution

Formula of Probability

is

$$P(A) = \frac{n}{N}$$

= $\frac{\text{Favourable cases}}{\text{Possible cases}}$

So, Probability of getting

i- (8) is = $\frac{1}{12}$

iii- a Perfect square is =

$$\frac{2}{12} = \frac{1}{6}$$

ii- Even number is =

$$\frac{6}{12} = \frac{1}{2}$$

IV- a negative number is

$$= \frac{0}{12} = 0$$

V- A number less than

13 is =

$$\frac{12}{12} = 1$$



Qno # 8(d)

Solution:

Group of nine students
having ages:

15, 15, 16, 16, 16, 17, 17, 18, 19

Mean of students =

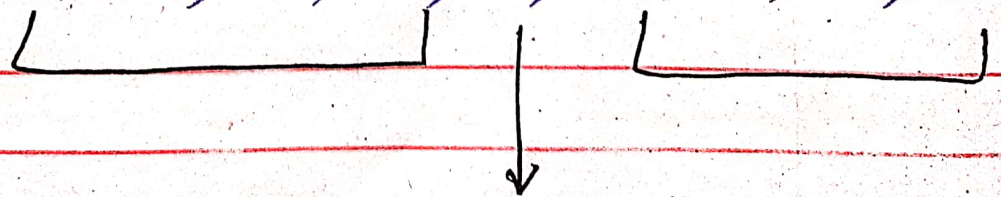
$$\frac{15+15+16+16+16+17+17+18+19}{9}$$

$$= \frac{149}{9} = 16.5\bar{5}$$

$$\text{Mean} = 16.5\bar{5}$$

Medium of students is

15, 15, 16, 16, 16, 17, 17, 18, 19



$$\text{Medium is} = 16$$

Mode of group of students =

15, 15, 16, 16, 16, 17, 17, 18, 19

Most repetitive is 16,
So, mode is 16

Range of group of students :

$$\text{Range} = \text{Maximum age} - \text{Minimum age}$$

$$= 19 - 15$$

$$= 04$$

QNO # 07 (a)

Solution

$$T = 400 \text{ seats}$$

$$O = 325 \text{ occupied}$$

Attendance at a % capacity

$$\text{Absent/Valent} = 400 - 325 = 75$$

$$\text{Valent in \%} = \frac{75}{400} \times 100$$

$$= 18.75$$

So, attendance in terms of Percent capacity is

$$= 100 - 18.75$$

$$= \boxed{81.25\%}$$

Qno # 07 (b)

Solution :

Persons	Weight of sugar	Days
30	40	10
↓ 80	↑ 320	↑ x

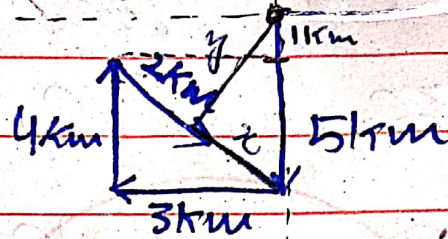
$$\frac{x}{10} = \frac{30}{80} \times \frac{320}{40}$$

$$x = 10 \times (3)$$

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

Thus, 80 persons use 320kg of sugar 30 days.

Solution:



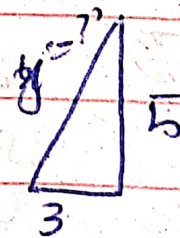
Apply Pythagoras Theorem

$$(2+x)^2 = \sqrt{4^2 + (3)^2}$$

$$2+x = \sqrt{16+9}$$

$$2+x = \sqrt{25} = 5$$

$$\boxed{x = 3}$$



$$y^2 = (3)^2 + (5)^2 = 9 + 25$$

$$y = \sqrt{36} \Rightarrow 6$$

3

This Crow is 6km
away from its original
position.

Q no # 07 (d)

Solution

$$R = 10 \text{ cm}$$

$$h = 36 \text{ cm}$$

$$V = ??$$

$$\text{Volume of cylinder} = \pi r^2 h$$

$$V = \pi \times (10)^2 \times 36$$

$$V = \pi \cdot 100 \times 36$$

$$V = 3600\pi \text{ cm}^3$$

$$V = 3600 \times 3.14 \text{ cm}^3$$

$$V = 11,304 \text{ cm}^3$$

Qno# 04(c)

Types of Waves Used in:

RADAR:

Radar uses Radio-waves to determine distance and angle of objects.

SONAR:

SONAR uses Ultrasonic waves for its objects.

LIDAR:

Lidar uses visible ~~or~~ light or radiation to detect

the object.

Mobile Phone :

Mobile phone uses Radio Waves for transmitting its signals.

Thermistors :

It is a Thermally sensitive resistor that changes value with the temperature.