

Section: - A

(1) Base $\rightarrow 10$, S.B. $\rightarrow 20$, S.B.D. $\rightarrow 2$
 $(No.)^2 = S.B.D. [No. + Dev.] / Dev.^2$
 $(17)^2 = 2 [17 - 3] / [-3]^2$
 $= 2 \times 14 / 9$
 $= 28 / 9$
 $\Rightarrow 17^2 = 289$ Ans.

$\Rightarrow 90^\circ - 5\theta = \theta - 36^\circ$
 $90 + 36 = \theta + 5\theta$
 $6\theta = 126$
 $\theta = \frac{126}{6} = 21$
 $\theta = 21^\circ$ Ans.

(2) $\frac{1}{x+1} - \frac{1}{x+3} = \frac{1}{x+2} - \frac{1}{x+4}$

Write it again in following way

$\frac{1}{x+1} + \frac{1}{x+4} = \frac{1}{x+2} + \frac{1}{x+3}$

Now sum of den. of L.H.S. = $x+1+x+4$
 $= 2x+5$

Sum of den. of R.H.S. = $x+2+x+3$
 $= 2x+5$

\therefore Sum of den. of L.H.S. = Sum of den. of R.H.S.

Hen by subtraction samuchhate

$2x+5 = 0$

$2x = -5$

$x = \frac{-5}{2}$ Ans.

(3) L.C.M. of 4 & 18 = 36

H.C.F. of 4 & 18 = 2

We know

Product of two No. = L.C.M. \times H.C.F.

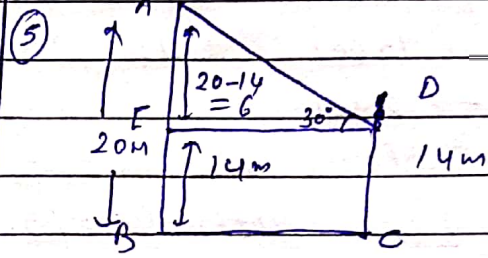
$a \times b = \frac{36 \times 2}{2}$

$a = 4$ Ans.

(4) $\sec 5\theta = \csc (\theta - 36^\circ)$

We know $\csc (90 - \theta) = \sec \theta$

Hen $\csc (90 - 5\theta) = \csc (\theta - 36^\circ)$



(5)

in $\triangle AED$

$\sin \theta = \frac{P}{H} = \frac{AE}{AD}$

$\sin 30^\circ = \frac{6}{AD} \Rightarrow \frac{1}{2} = \frac{6}{AD}$

$AD = 12m$

Hen length of wire = 12m Ans.

(6) The locus of a point which is equidistant from three non-collinear points will be circumcentre.

(7) \therefore AD is angle bisector of $\angle A$
 Hen by angle bisector theorem

$\frac{AB}{AC} = \frac{BD}{DC}$

$\frac{4}{AC} = \frac{9}{5}$

$9AC = 20$

$AC = \frac{20}{9}$ Ans.

⑧ $P(A) = 0.65$ then
 $P(\text{not } A) \text{ 'or' } P(\bar{A}) = 1 - P(A)$
 $P(\bar{A}) = 1 - 0.65$
 $P(\bar{A}) = 0.35$ Ans.

⑨ first \rightarrow 3 sec. then it will
 second \rightarrow 9 sec be an A.P.
 third \rightarrow 15 sec $a=3, d=9-3$
 fourth \rightarrow 21 sec $d=6$

1 1 then $a_n = 69$
 1 1 $a + (n-1)d = 69$
 $3 + (n-1)6 = 69$
 $3 + 6n - 6 = 69$
 $6n - 3 = 69$
 $6n = 69 + 3$
 $6n = 72$
 $n = \frac{72}{6} = 12$

in 69 sec 9 will cross 12th signal

⑩ Stopping distance = Breaking distance + Reaction distance
 stopping distance = $2 + 1 = 3$ m Ans.

Section 1 - B

① Base = 100, Sub Base \rightarrow 100
 S.B.D. \rightarrow 1 Dev \rightarrow -0.3

| | | | |
|----|-----|---|------------------------|
| 97 | 3 | 9 | 94 |
| 03 | ↓ | ↓ | 7 |
| | 3 | 9 | 211 |
| | + 2 | | -194 |
| | | | 17 \rightarrow 17 cm |

Ans \rightarrow 41

97) 211 2
 $\frac{194}{17}$

② Let $\sqrt{2} + \sqrt{5}$ is a rational number then

$\sqrt{2} + \sqrt{5} = \frac{p}{q}$ where p, q are integers

$\sqrt{2} = \frac{p}{q} - \sqrt{5}$ Do square both side

$(\sqrt{2})^2 = \left(\frac{p}{q} - \sqrt{5}\right)^2$

$2 = \frac{p^2}{q^2} + 5 - \frac{2 \times p \sqrt{5}}{q}$

then $\frac{2p\sqrt{5}}{q} = \frac{p^2}{q^2} + 5 - 2$

or $\sqrt{5} = \frac{q}{2p} \left[\frac{p^2}{q^2} + 3 \right]$

$\therefore p, q, 2, 3$ all are integer
 then $\frac{q}{2p} \left[\frac{p^2}{q^2} + 3 \right]$ will be a rational number but $\sqrt{5}$ is an irrational number then our assumption is wrong that's why $\sqrt{2} + \sqrt{5}$ will be irrational number.

③ A/c to question

$r = 5$ cm

we know minute hand makes an angle of 6° in one minute then it makes angle of $6 \times 7 = 42^\circ$ in 7 minute

then area of sector = $\frac{\pi r^2 \theta}{360^\circ}$
 $= \frac{22}{7} \times 5 \times 5 \times 42$
 $= \frac{55}{6} = 9.16 \text{ cm}^2$

(4) T.S.A. of ball = 1386 cm^2

$4\pi r^2 = 1386$
 $\frac{4 \times 22}{7} \times r^2 = 1386$

$r^2 = \frac{126 \times 7}{4}$

$r = \sqrt{\frac{441}{4}} = \frac{21}{2}$

$r = 10.5 \text{ cm}$

or

(4) A/c to question

$r_1 = 5 \text{ cm}$ & $r_2 = 5 \text{ cm}$

$r_2 = \frac{5}{10}$

No. of small sphere = $\frac{\text{Volume of large sphere}}{\text{Volume of small sphere}}$

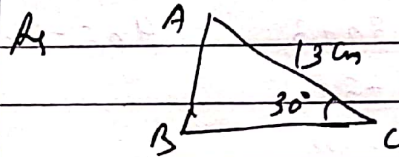
$= \frac{\frac{4}{3} \pi r_1^3}{\frac{4}{3} \pi r_2^3}$

$= \frac{5 \times 5 \times 5}{10 \times 10 \times 10}$

$\Rightarrow 1000$ Small sphere

(5) Note:- Question 5 is written wrong in question paper solve this question at place of question 1-5.

Q(5) find the height of camera which is situated on pole and by this camera we can see up to 13 cm LOS and angle of depression is 30° from point on the ground.



in $\triangle ABC$ $\sin 30^\circ = \frac{P}{H}$

$\frac{1}{2} = \frac{AB}{13} \rightarrow \text{then } AB = \frac{13}{2}$

Section:- C

(1) Let first positive odd integer is x then second will $x+2$

Now A/c to question

$x^2 + (x+2)^2 = 290$

$x^2 + x^2 + 4x + 4 = 290$

$2x^2 + 4x + 4 - 290 = 0$

$2x^2 + 4x - 286 = 0$

$2[x^2 + 2x - 143] = 0$

$x^2 + 2x - 143 = 0$

$x^2 + (13-11)x - 143 = 0$

$x^2 + 13x - 11x - 143 = 0$

$x(x+13) - 11(x+13) = 0$

$(x+13)(x-11) = 0$

⑧ $x+13=0$ | $x-11=0$
 $x=-13$ | $x=11$
 then first odd +ve integer = 11
 & second odd +ve integer will
 $11+2=13$ Ans.

Now difference between shadow $CD = BD - BC$
 then by eq ① & ②

$$CD = \frac{15\sqrt{3} - 15}{1 \quad \sqrt{3}}$$

$$CD = \frac{45-15}{\sqrt{3}} = \frac{30}{\sqrt{3}} \times \frac{\sqrt{3}}{\sqrt{3}}$$

$$CD = \frac{30\sqrt{3}}{3} = 10\sqrt{3} = 10 \times 1.732$$

$$CD = 17.32 \text{ m}$$

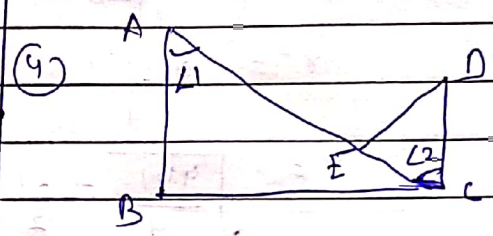
⑨ (2) $(-5) + (-8) + (-11) + \dots + (-230)$
 $a_n = a + (n-1)d$ $a = -5$
 $d = -8 - (-5)$
 then $-230 = -5 + (n-1) \times -3$ $d = -8 + 5 = -3$
 $-230 = -5 - 3n + 3$ $a_n = -230$
 $-230 + 2 = -3n$
 $-228 = -3n$
 $n = \frac{-228}{-3} = 76$

Now $S_n = S_{76} = \frac{n}{2}(a+l)$

$$S_{76} = \frac{38 \times 76}{2} (-5 - 230)$$

$$S_{76} = 38 \times -235 = -8930$$

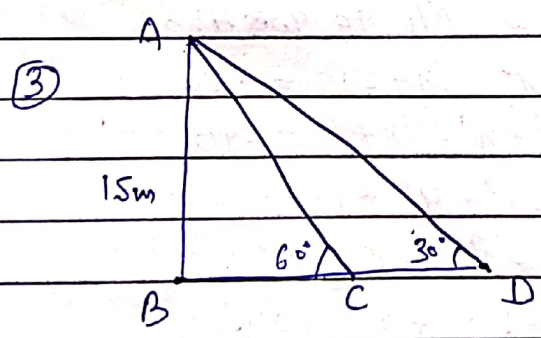
$$S_{76} = -8930 \text{ Ans.}$$



Given $AB \perp BC$, $DC \perp BC$
 & $DE \perp AC$

to prove $\triangle CED \sim \triangle ABC$

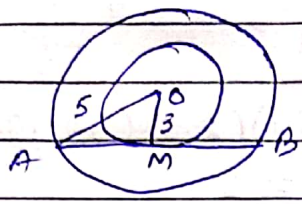
Proof: $\because AB \perp BC, DC \perp BC$
 then $AB \parallel CD$ $\therefore \angle B + \angle C = 180^\circ$
 and they are co-interior angle
 if they have sum = 180° then
 $AB \parallel CD$ Now in $\triangle ABC$ &
 $\triangle DEC$



in $\triangle ABC$ in $\triangle ABD$
 $\tan \theta = \frac{p}{b}$ $\tan 30^\circ = \frac{AB}{BD}$
 $\tan 60^\circ = \frac{AB}{BC}$ $\frac{1}{\sqrt{3}} = \frac{15}{BD}$
 $\frac{\sqrt{3}}{1} = \frac{15}{BC}$ $BD = 15\sqrt{3}$
 $BC = \frac{15}{\sqrt{3}}$ - ①

$\angle B = \angle E = 90^\circ \rightarrow$ given
 $\angle C = \angle C \rightarrow$ A.I. Angle then
 By AA Rule
 $\triangle ABC \sim \triangle CED$ H.P.

(5) $r_1 = 5\text{cm}$, $r_2 = 3\text{cm}$



In $\triangle AOM \Rightarrow AO^2 = OM^2 + AM^2$
 $5^2 = 3^2 + AM^2$
 $AM^2 = 25 - 9 = 16$
 $AM = \sqrt{16} = 4$

$AM = 4\text{cm}$ Then length of chord or height of chord is
 $AB = 2 \times AM = 2 \times 4 = 8\text{cm}$

and $O'E \perp BC$ & $OD \perp AC$
 that's why $O'E \parallel OD$ and
 $OO'ED$ will be a rectangle
 that's why

$OO' = ED$

But $OO' = EC + CD$
 $\therefore EC = \frac{BC}{2}$

$\& CD = \frac{AC}{2}$

Then $OO' = \frac{BC + AC}{2}$

$OO' = \frac{BC + AC}{2}$ But $BC + AC = AB$

Then $OO' = \frac{AB}{2}$

or $AB = 2OO'$ H.P.

(6) A/c to figure ABCD is cyclic quadrilateral then

$\angle A + \angle C = 180^\circ$ | $\angle B + \angle D = 180^\circ$

$y + 2y = 180^\circ$ | $2x + 2x = 180^\circ$

$3y = 180^\circ$ | $4x = 180^\circ$

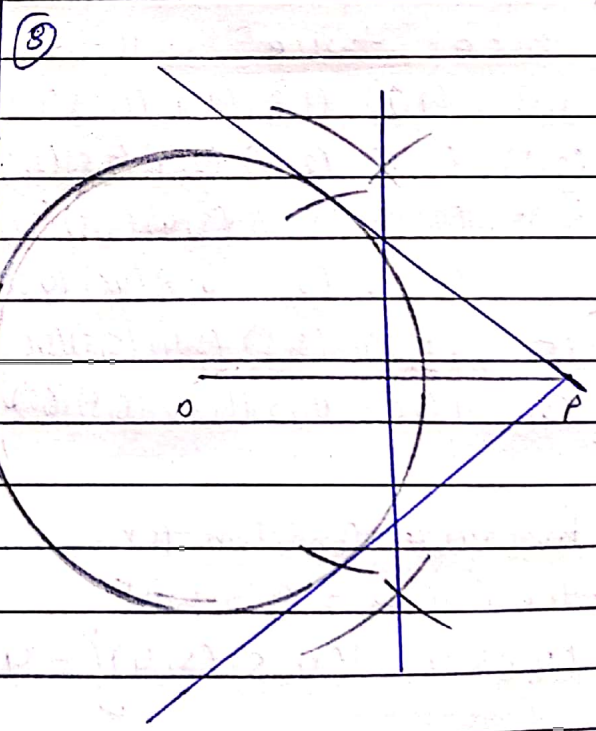
$\therefore \angle y = 60^\circ$ | $x = 36^\circ$

or $\angle A = y = 60^\circ$ | $\angle B = 3x$

$\angle C = 2 \times y = 2 \times 60^\circ = 120^\circ$ | $\angle B = 3 \times 36$

$\angle B = 108^\circ$

$\& \angle D = 2x = 2 \times 36 = 72^\circ$



(7) Given O & O' are the centre of two circle and $AB \parallel OO'$

to prove $AB = 2OO'$

Proof: $\therefore AB \parallel OO' \Rightarrow ED \parallel OO'$

⑨ Diameter of sphere = 6 cm
 Then radius of sphere = $\frac{6}{2} = 3$ cm

length of wire = 36 m = 3600 cm
 or height of wire = 3600 cm

Now A/c to question

Volume of sphere = Volume of wire

$$\frac{4}{3} \pi r_1^3 = \pi r_2^2 h$$

$$\frac{4}{3} \times 3 \times 3 \times 3 = r_2^2 \times 3600$$

$$r_2^2 = \frac{1}{100}$$

$$r_2 = \sqrt{\frac{1}{100}} = \frac{1}{10}$$

$$r_2 = \frac{1}{10} \text{ cm Ans.}$$

(ii) favourable condition for getting sum = 7

$$\{(1,6) (6,1) (2,5) (5,2) (3,4) (4,3)\} = 6$$

$$\text{then } P(A) = \frac{6}{36} = \frac{1}{6}$$

(iii) favourable condition for getting sum = 5

$$\{(1,4) (4,1) (2,3) (3,2)\} = 4$$

$$\text{then } P(A) = \frac{4}{36} = \frac{1}{9} \text{ Ans.}$$

Section - D

⑩ total No. of condition for a dice twice will = 36

- ⇒ $\{(1,1), (1,2), (1,3), (1,4), (1,5), (1,6)\}$
- $\{(2,1), (2,2), (2,3), (2,4), (2,5), (2,6)\}$
- $\{(3,1), (3,2), (3,3), (3,4), (3,5), (3,6)\}$
- $\{(4,1), (4,2), (4,3), (4,4), (4,5), (4,6)\}$
- $\{(5,1), (5,2), (5,3), (5,4), (5,5), (5,6)\}$
- $\{(6,1), (6,2), (6,3), (6,4), (6,5), (6,6)\}$

(i) favourable condition for getting sum = 9 will

$$\{(3,6) (6,3) (4,5) (5,4)\} = 4$$

$$P(A) = \frac{f.c.}{T.c.} = \frac{4}{36} = \frac{1}{9}$$

⑪ $3x + y = 2$; $2x - 3y = 5$

$$3x = 2 - y$$

$$x = \frac{2-y}{3}$$

Put $y = -1$

$$x = \frac{2 - (-1)}{3}$$

$$x = \frac{3}{3} = 1$$

Put $y = 2$

$$x = \frac{2-2}{3} = \frac{0}{3}$$

$$x = 0$$

Put $y = 8$

$$x = \frac{2-8}{3} = \frac{-6}{3}$$

$$x = -2$$

| | | | |
|---|----|---|----|
| x | 1 | 0 | -2 |
| y | -1 | 2 | 8 |

$$2x = 5 + 3y$$

$$x = \frac{5+3y}{2}$$

Put $y = -1$

$$x = \frac{5+3(-1)}{2}$$

$$x = \frac{5-3}{2} = \frac{2}{2} = 1$$

Put $y = 1$

$$x = \frac{5+3(1)}{2} = \frac{5+3}{2}$$

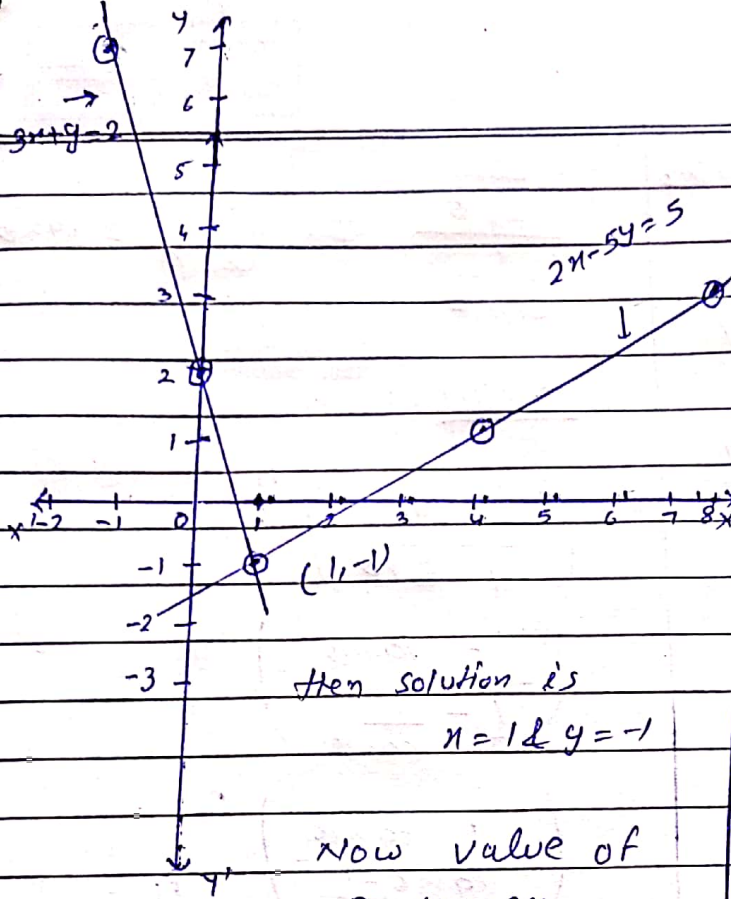
$$x = \frac{8}{2} = 4$$

Put $y = 3$

$$x = \frac{5+3(3)}{2} = \frac{5+9}{2}$$

$$x = \frac{14}{2} = 7$$

| | | | |
|---|----|---|---|
| x | 1 | 4 | 7 |
| y | -1 | 1 | 3 |



then solution is
 $x = 1$ & $y = -1$

Now value of
 $P = 4x + 3y$
 $P = 4 \times 1 + 3 \times -1$
 $P = 4 - 3 = 1$ Ans.

(ii)
$$\frac{(1 + \cot\theta + \tan\theta)(\sin\theta - \cos\theta)}{\sec^3\theta - \operatorname{cosec}^3\theta} = \sin^2\theta \cos^2\theta$$

L.H.S.
$$\frac{(1 + \cot\theta + \tan\theta)(\sin\theta - \cos\theta)}{\sec^3\theta - \operatorname{cosec}^3\theta}$$

$$\frac{\left(\frac{1 + \cos\theta}{\sin\theta} + \frac{\sin\theta}{\cos\theta}\right)(\sin\theta - \cos\theta)}{\frac{1}{\cos^3\theta} - \frac{1}{\sin^3\theta}}$$

$$\frac{\left(\frac{\sin\theta \cos\theta + \cos^2\theta + \sin^2\theta}{\sin\theta \cos\theta}\right)(\sin\theta - \cos\theta)}{\frac{\sin^3\theta - \cos^3\theta}{\cos^3\theta \sin^3\theta}}$$

We know $a^3 - b^3 = (a-b)(a^2 + ab + b^2)$

from
$$\frac{(\sin^3\theta - \cos^3\theta)}{\sin\theta \cos\theta} \Rightarrow \sin^2\theta \cos^2\theta$$

$$\frac{(\sin^3\theta - \cos^3\theta)}{\sin^3\theta \cos^3\theta}$$

$\Rightarrow \sin^2\theta \cos^2\theta$
 \Rightarrow L.H.S.
 \Rightarrow H.P.

(2) (a) $(\sec\theta - \tan\theta)^2 = \frac{1 - \sin\theta}{1 + \sin\theta}$

L.H.S.
$$\frac{(\sec\theta - \tan\theta)^2}{\left[\frac{1}{\cos\theta} - \frac{\sin\theta}{\cos\theta}\right]^2} = \frac{(1 - \sin\theta)^2}{\cos^2\theta}$$

$$\frac{(1 - \sin\theta)^2}{1 - \sin^2\theta} = \frac{(1 - \sin\theta)^2}{(1 + \sin\theta)(1 - \sin\theta)}$$

$$\Rightarrow \frac{1 - \sin\theta}{1 + \sin\theta} \quad \text{H.P.}$$

or

(i) $\sin\theta(1 + \tan\theta) + \cos\theta(1 + \cot\theta) = \sec\theta + \csc\theta$

L.H.S.

$$\sin\theta(1 + \tan\theta) + \cos\theta(1 + \cot\theta)$$

$$\sin\theta \left[\frac{1 + \sin\theta}{\cos\theta} \right] + \cos\theta \left[\frac{1 + \cos\theta}{\sin\theta} \right]$$

$$\sin\theta \left[\frac{\cos\theta + \sin\theta}{\cos\theta} \right] + \cos\theta \left[\frac{\sin\theta + \cos\theta}{\sin\theta} \right]$$

$$(\sin\theta + \cos\theta) \left[\frac{\sin\theta + \cos\theta}{\cos\theta \sin\theta} \right]$$

$$(\sin\theta + \cos\theta) \left[\frac{\sin^2\theta + \cos^2\theta}{\cos\theta \sin\theta} \right]$$

$$(\sin\theta + \cos\theta) \times \frac{1}{\cos\theta \sin\theta}$$

$$\frac{\sin\theta + \cos\theta}{\cos\theta \sin\theta}$$

$$\frac{\cancel{\sin\theta}}{\cos\theta \cancel{\sin\theta}} + \frac{\cancel{\cos\theta}}{\cos\theta \cancel{\sin\theta}}$$

$$\frac{1}{\cos\theta} + \frac{1}{\sin\theta}$$

$$\Rightarrow \sec\theta + \csc\theta$$

(ii) $\left(\frac{1 + \tan^2\theta}{1 + \cot^2\theta} \right) = \left(\frac{1 - \tan\theta}{1 - \cot\theta} \right)^2$

L.H.S.

$$\left(\frac{1 + \tan^2\theta}{1 + \cot^2\theta} \right) = \frac{\sec^2\theta}{\csc^2\theta}$$

$$\frac{1}{\cos^2\theta} = \frac{\sin^2\theta}{\cos^2\theta} = \tan^2\theta$$

$$\frac{1}{\sin^2\theta}$$

R.H.S.

$$\left(\frac{1 - \tan\theta}{1 - \cot\theta} \right)^2$$

$$\left(\frac{1 - \tan\theta}{1 - \frac{1}{\tan\theta}} \right)^2$$

$$\left(\frac{1 - \tan\theta}{\frac{\tan\theta - 1}{\tan\theta}} \right)^2$$

$$\left[\frac{(1 - \tan\theta)}{-(1 - \tan\theta)} \right]^2$$

$$(-\tan\theta)^2 = \tan^2\theta$$

= L.H.S.

H.P.

(3) (c) Mid point of line segment which Joint Point (6,8) & (2,4) will

P $\left[\frac{6+2}{2}, \frac{8+4}{2} \right]$ By formula $\left[\frac{x_1+x_2}{2}, \frac{y_1+y_2}{2} \right]$

P $\left[\frac{8}{2}, \frac{12}{2} \right]$

P (4,6)

Now Distance of Point P (4,6) from Point A(1,2)

$$PA = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$$

$$= \sqrt{(1-4)^2 + (2-6)^2}$$

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

$$= \sqrt{9+16} = \sqrt{25}$$

PA = 5 cm

(5) P(3,5) Let Point B is B(x,y)
 A(2,3) 4:7 B(x,y)
 x_1, y_1 x_2, y_2
 $m:n$

Co-ordinate of Point P will

$$P \left[\frac{mx_2 + ny_1}{m+n}, \frac{my_2 + nx_1}{m+n} \right]$$

$$P \left[\frac{4x + 7 \times 2}{4+7}, \frac{4y + 7 \times 3}{4+7} \right]$$

$$P \left[\frac{4x-14}{11}, \frac{4y+21}{11} \right]$$

But P [3, 5] then

$$\frac{4x-14}{11} = 3 \quad \left| \quad \frac{4y+21}{11} = 5 \right.$$

$$4x = 11 \times 3 + 14 \quad \left| \quad 4y = 55 - 21 \right.$$

$$4x = 33 + 14 \quad \left| \quad 4y = 34 \right.$$

$$4x = 47 \quad \left| \quad y = \frac{34}{4} = \frac{17}{2} \right.$$

$$x = \frac{47}{4} \quad \left| \quad y = \frac{17}{2} \right.$$

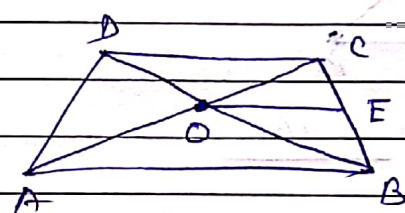
then point B $\left[\frac{47}{4}, \frac{17}{2} \right]$

Q. (9) Given Diagonals of quadrilateral ABCD, intersect each other at point O, such that

$$\frac{OA}{OB} = \frac{OC}{OD}$$

to Prove ABCD is a trapezium.

~~Proof~~ Construction Draw OE || AB



Proof $\therefore \frac{OA}{OB} = \frac{OC}{OD}$

then $\frac{OA}{OC} = \frac{OB}{OD}$ — (1)st

But By Construction OE || AB

then $\frac{OC}{OA} = \frac{CE}{EA}$ By B.P.T.

and $\frac{OA}{OC} = \frac{EB}{EC}$ — (2)nd

from eq (1)st & eq (2)nd

$$\frac{OB}{OD} = \frac{EB}{EC}$$

But if in ΔBCD ,

$$\frac{OB}{OD} = \frac{EB}{EC} \text{ then}$$

Converse of B.P.T. OE || CD

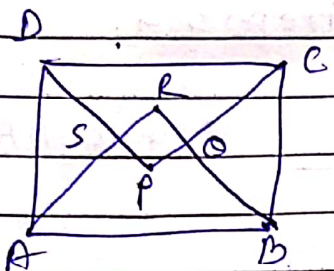
But OE || AB By Construction

then OE || AB || CD or ABCD is a trapezium H.P.

or

Q.4) Given quadrilateral PQRS is made by the bisector of angles of cyclic quadrilateral ABCD.

To Prove: Quadrilateral PQRS is also a cyclic quadrilateral



Proof in $\triangle ABR$

$\angle 1 + \angle 2 + \angle R = 180^\circ$ + angle sum property of \triangle

But $\angle 1 = \frac{\angle A}{2}$ & $\angle 2 = \frac{\angle B}{2}$

Then $\frac{\angle A}{2} + \frac{\angle B}{2} + \angle R = 180^\circ$

or $\angle R = 180^\circ - \frac{\angle A}{2} - \frac{\angle B}{2}$ (1st)

in the same way in $\triangle DPC$

$\angle P = 180^\circ - \frac{\angle C}{2} - \frac{\angle D}{2}$ (2nd)

add eq. (1)st & (2)nd

$\angle P + \angle R = 360^\circ - \frac{\angle A}{2} - \frac{\angle B}{2} - \frac{\angle C}{2} - \frac{\angle D}{2}$

$\angle P + \angle R = 360^\circ - \left[\frac{\angle A + \angle B + \angle C + \angle D}{2} \right]$

But $\angle A + \angle B + \angle C + \angle D = 360^\circ$

Then

$\angle P + \angle R = \frac{360^\circ - 360^\circ}{2} = 180^\circ$

or $\angle P + \angle R = 180^\circ$

if sum of opposite angle of a quadrilateral then it will be cyclic quadrilateral that's why PQRS is a cyclic quadrilateral. H.P.

Q.5

| C.I. | No. of students | $\% = \frac{v.l. \times 100}{N}$ | $\% \times f_i$ |
|-------|-----------------|----------------------------------|-----------------|
| 0-10 | 4 | 5 | 20 |
| 10-20 | 28 | 15 | 420 |
| 20-30 | 42 | 25 | 1050 |
| 30-40 | 26 | 35 | 910 |
| 40-50 | 6 | 45 | 270 |
| | 106 | | 2670 |

Mean = $\frac{\sum f_i x_i}{\sum f_i}$

$= \frac{2670}{106}$

Mean = 25.18 (Approx)

Ans

| C.F. | f_i | c.f. |
|-------|-----------------------|------|
| 0-10 | 4 | 4 |
| 10-20 | 28 | 32 |
| 20-30 | 42 | 74 |
| 30-40 | 26 | 100 |
| 40-50 | 6 | 106 |
| | Σf_i = 106 | |

$$\frac{N}{2} = \frac{106}{2} = 53$$

C.f. Just greater than $\frac{N}{2}$

is 74 then Median class interval will be 20-30 then

$$\text{Median} = l + \frac{\frac{N}{2} - C}{f} \times h$$

$$l = 20, \frac{N}{2} = 53, C = 32$$

$$f = 42, h = 10$$

$$\text{Median} = 20 + \frac{53 - 32}{42} \times 10$$

$$= 20 + \frac{21 \times 10}{42}$$

$$= 25 \text{ Ans.}$$

END.