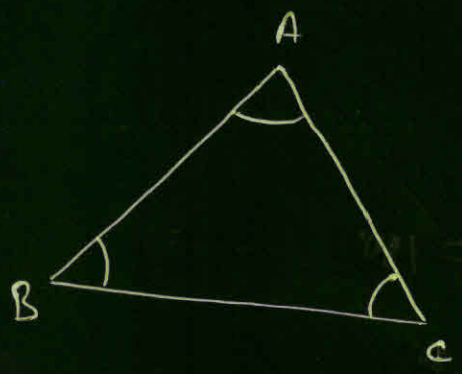
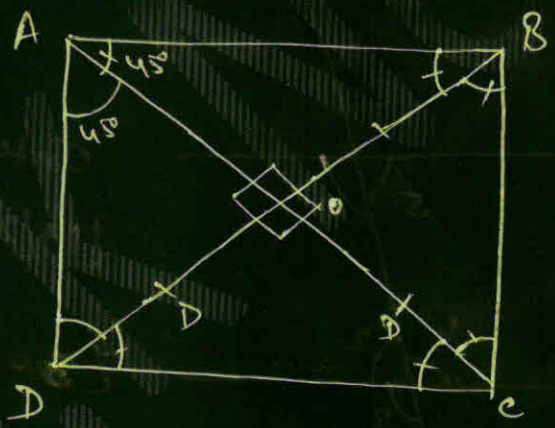
* — Geometry — *

⇒ Triangle :-



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

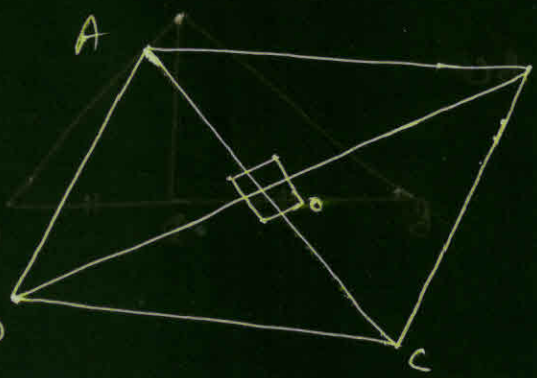
⇒ Square :-



Diagonal :- $AC = BD = \sqrt{2}a$

Area $= a \times a$.

⇒ Rhombus :-



$AB = BC = CD = DA$

$AC \neq BD$

$$\text{Area} = \frac{1}{2} \times D_1 \times D_2$$

$\angle A = \angle C$

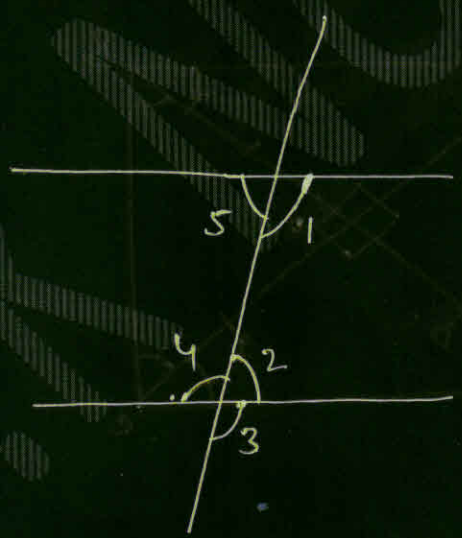
$\angle B = \angle D$

$\angle A + \angle B = 180^\circ$

$\angle B + \angle C = 180^\circ$

$\angle C + \angle D = 180^\circ$

$\angle D + \angle A = 180^\circ$



Interior angle =

$\angle 1 + \angle 2 = 180^\circ$

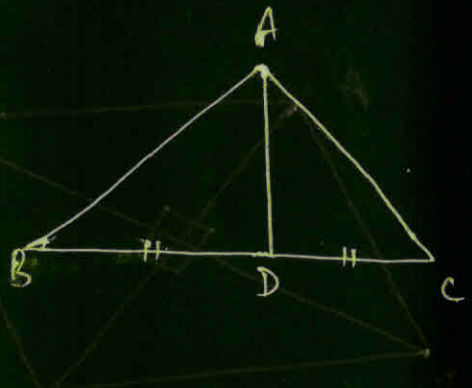
$\angle 3 = \angle 4$ = Corresponding Angle.

$\angle 2 = \angle 5$ Alternate Interior Angle.

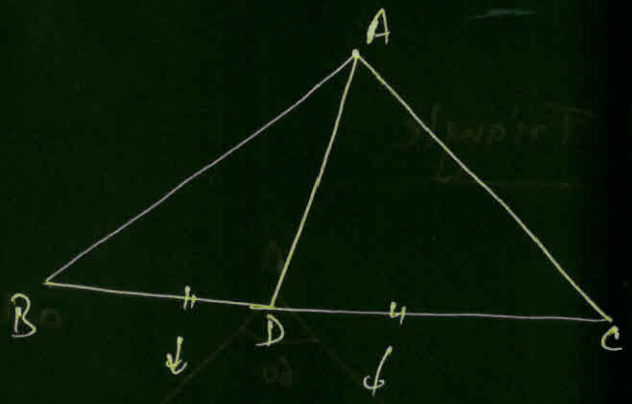
$\angle 1 = \angle 7$ Alternate Exterior Angle.

① Perpendicular :-

$AD \perp BC$

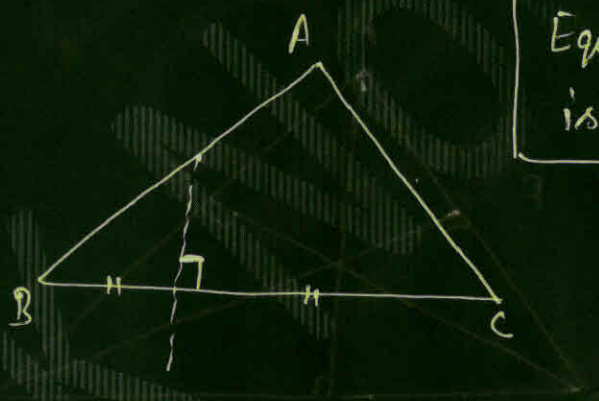


(2) Median :-



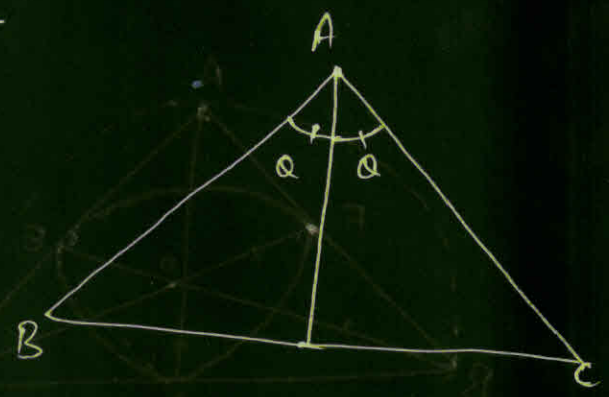
divide two equal side

(3) Perpendicular Bisector :-



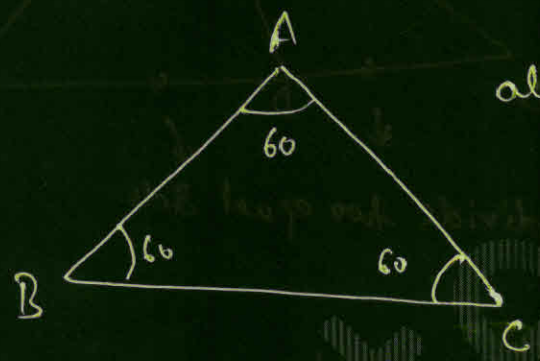
Equilteral △
isosceles △

(4) Angle Bisector :-



Triangles:

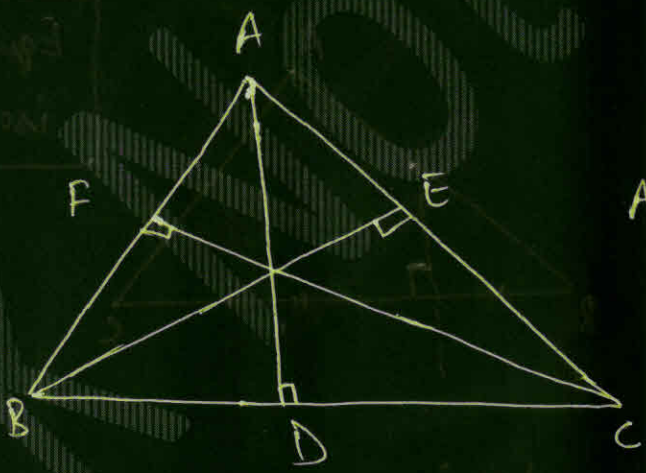
① Equilateral Triangle



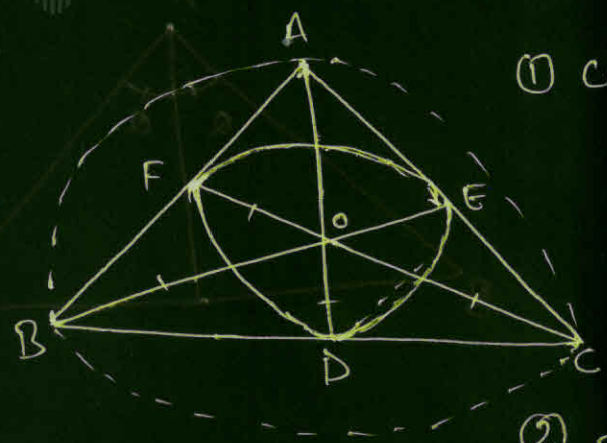
all Angle & all side will be equal.

$$\text{Area} = \frac{\sqrt{3}}{4} a^2$$

$$\text{Height} = \frac{\sqrt{3}}{2} a$$



$$AD = BE = CF$$



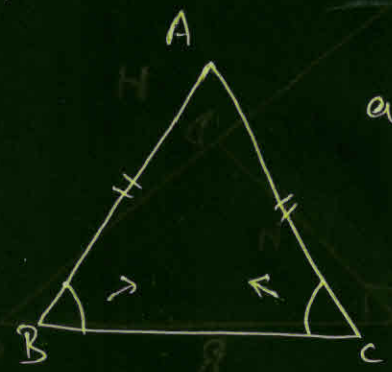
① Circum Radius $(R) = \frac{a}{\sqrt{3}}$

$OA = OB = OC$

② In-Radius $(r) = \frac{a}{2\sqrt{3}}$

$OD = OE = OF$

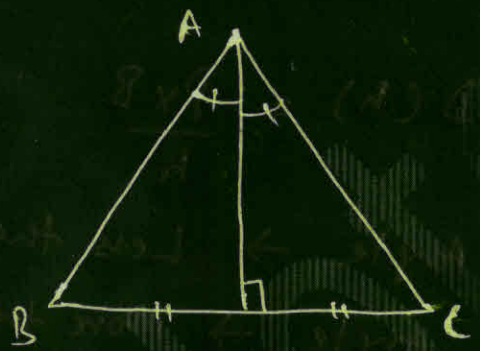
② Isosceles triangle :-



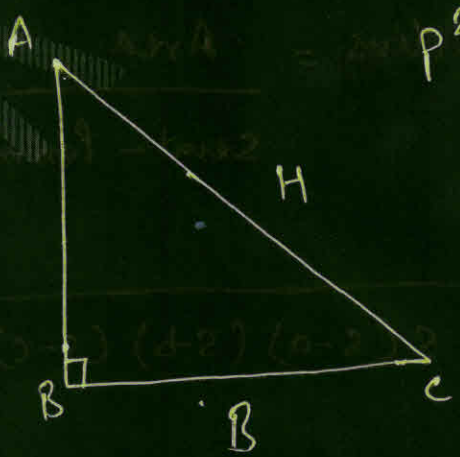
$$\text{area} = \frac{1}{2} \times AB \times AC \times \sin A$$

$$AB = AC$$

$$\angle B = \angle C$$



③ Right Angle triangle :-

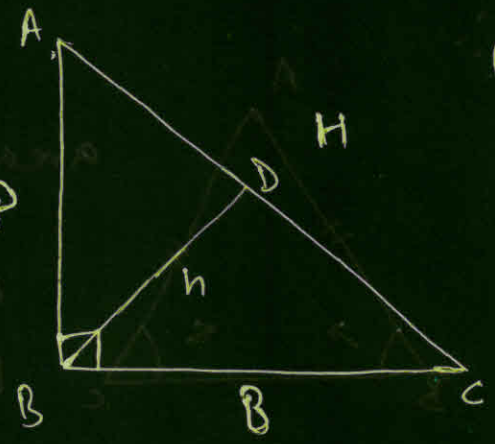


$$P^2 + B^2 = H^2$$

⇒ Right Angle Δ is one angle equal to 90°

⇒ Some Trignometry Triplate No.

3, 4, 5	9, 12, 15
6, 8, 10	7, 24, 25
60, 80, 100	
5, 12, 13	



$$(AB)^2 = AD \times AC$$

$$(BC)^2 = CD \times AC$$

$$(BD)^2 = AD \times CD$$

$$BD(h) = \frac{P \times B}{H}$$

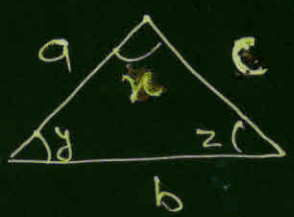
→ Acute Angle → Less than 90°

→ obtuse Angle → More than 90°

→ Circum - Radius = $\frac{a \times b \times c}{4 \times \text{Area}}$

→ In - Radius = $\frac{\text{Area}}{\text{semi - Perimeter}}$

$$\text{Area} = \sqrt{s(s-a)(s-b)(s-c)}$$



$$s = \frac{a+b+c}{2}$$

Q: Triangle A, B, C is an isosceles Triangle with Angle C. 90°. AC 5 cm. find AB.

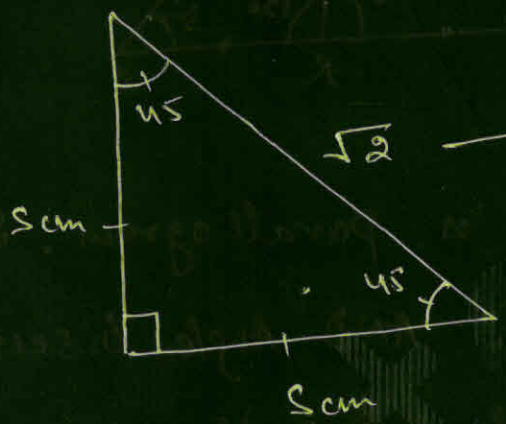
Soln:

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

$H^2 = 25 + 25$

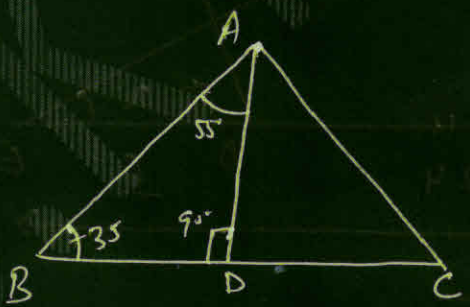
$H^2 = 50$

$H = 5\sqrt{2}$ Ans



Q: A, B, C is isosceles angle. Such that AB = AC and ∠B is 35. AD is median on side BC find ∠BAD.

Soln:



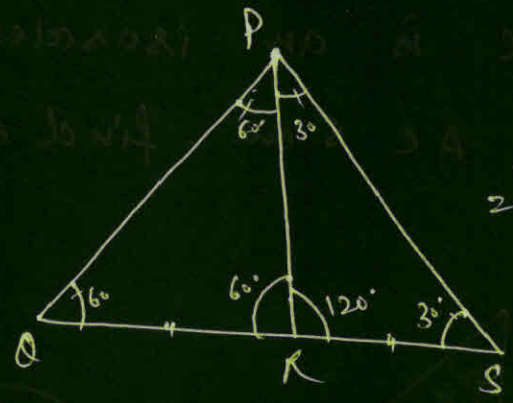
△ ⇒ 180°

$35 + 90 + A = 180$

$A = 180 - 125 = 55°$ Ans

Q: P, Q, R is equilateral Δ in which side QR is Produce upto point S in such a way that QR = RS find the Angle ∠PSR.

Ans :-

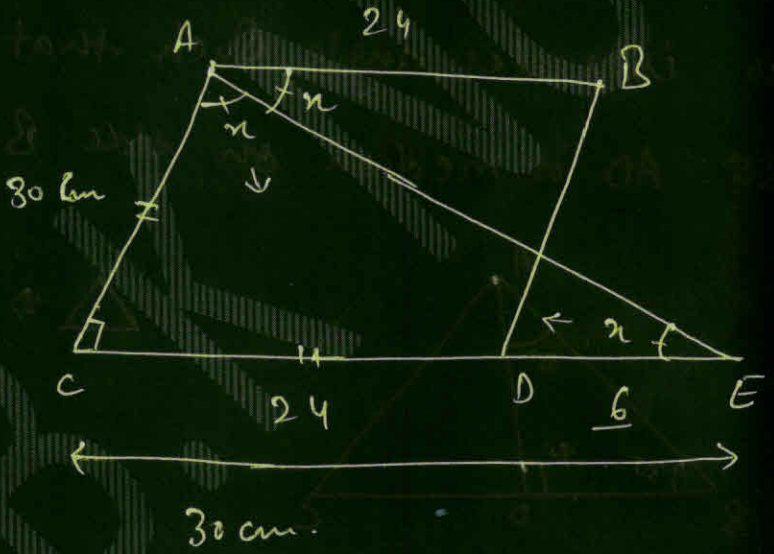


$60 + 60 = 120°$
$30 + 30 = 60$ → 180°

= (30) Ans

Q :- A, B, C, D is parallelogram. Side CD is extended upto point E. AND Angle bisector of Angle ∠B meets Point E. find DE if AB 24 cm and BC 30 cm

Soln :-

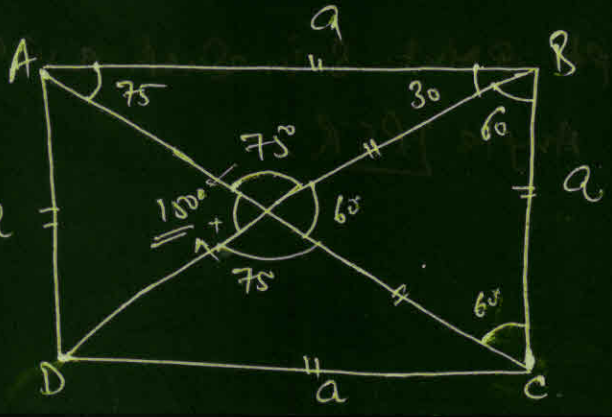


= (6) Ans

Q :- A, B, C, D is a Square on side BC and equilateral Δ. ΔBEC is drawn inside a Square find Ang ∠AED.

Soln :-

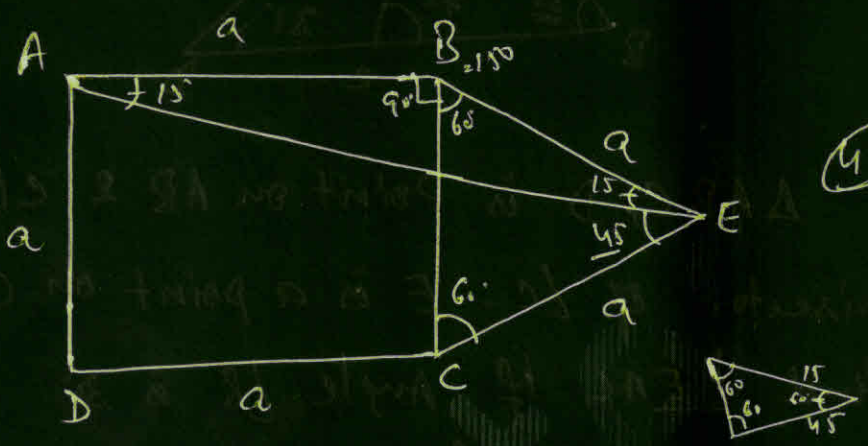
$360° - 210°$
$= 150$



(150) Ans

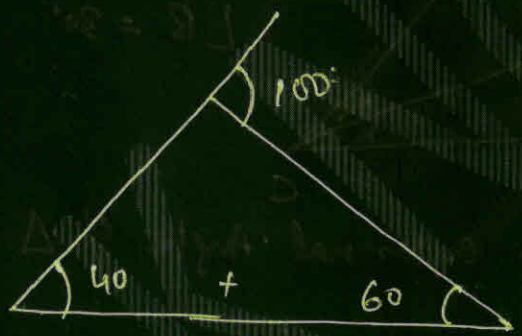
Q: ABCD is Square on side BC Equilateral Δ. Δ BEC is drawn outside of Square find the ∠AEC.

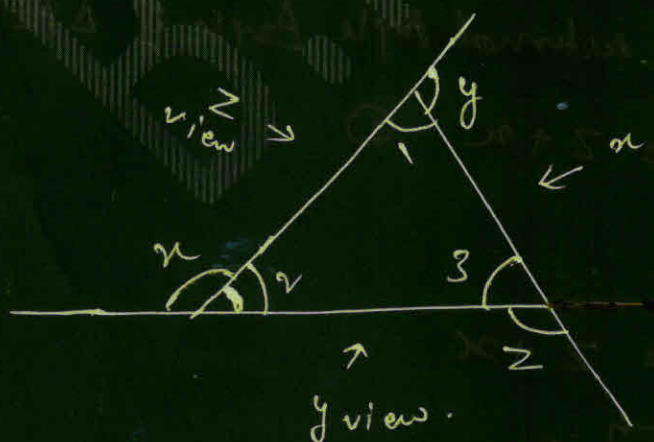
Soln:



(45) Ans.

Q:





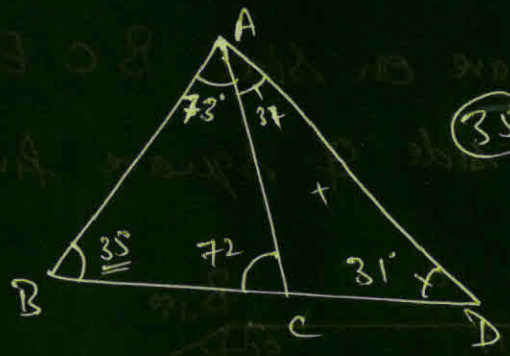
$x = 1+3$

$y = 2+3$

$z = 1+2$

Q: In a Δ A, B, C Side Bc. is extended upto Point D. Such that CD = AC if ∠BAD is 109°. ∠ACB is 72° then find ∠ABC = ?

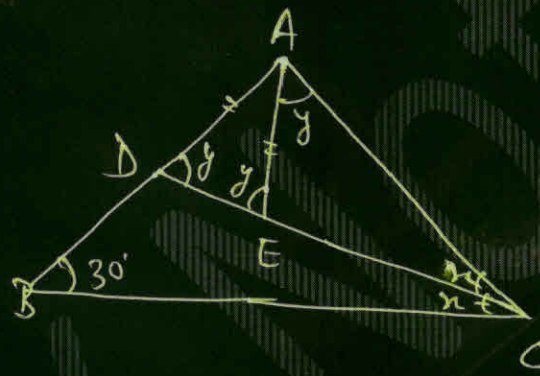
Soln:



(35°) Ans

Q: In ΔABC, D is point on AB & CD is an Angle Bisector of $\angle C$. E is a point on CD. & AD = AE. Find $\angle EAC$ If Angle $\angle B$ is 30°

Soln:



$\angle EAC = ?$

$\angle B = 30°$

$\angle ADE$ is an external Angle of ΔDBC

$$y = 30 + x \quad -①$$

$\angle AED$ is an external Angle Angle of ΔAEC.

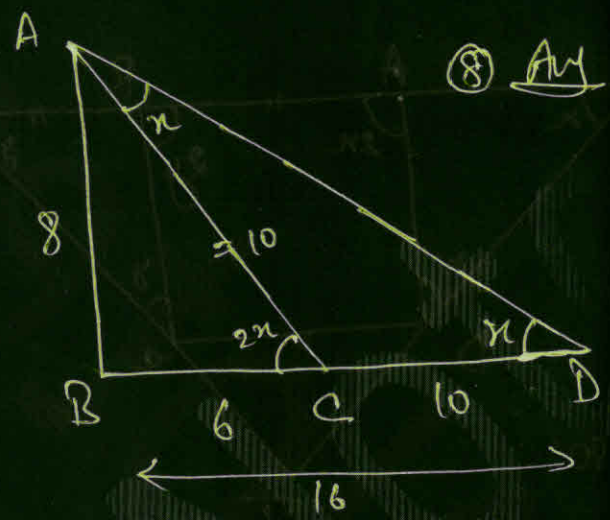
$$y = z + x \quad -②$$

① = ②

$$30 + x = z + x$$

$$\boxed{z = 30°} \text{ Ans}$$

Q:- A BC is right Angle triangle In which B is Right Angle. Side BC is extended up to point D. Such that ∠ADB is half of ∠ACB. if BD = 16 cm & CD = 10 cm then find AB.



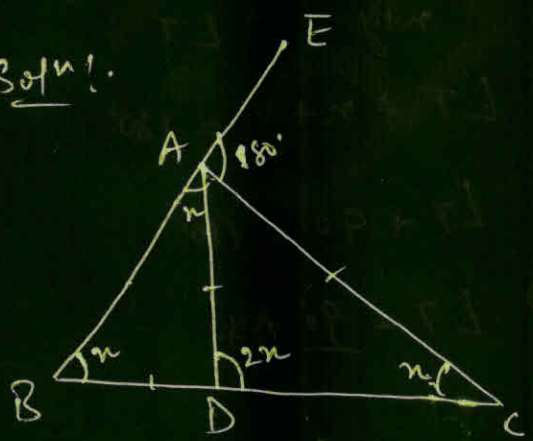
(8) Ans

Q:- In a ΔABC, D is point BC such that ~~AA~~ AD = BD = AC side BA is extented up to point E. If Angle ∠CAE = 80°. find Angle ∠C.

∠CAE = 80° . Soln:-

AD = BD = AC

∠C = ?



∠CAE = ∠B + ∠C

80 = x + 2x

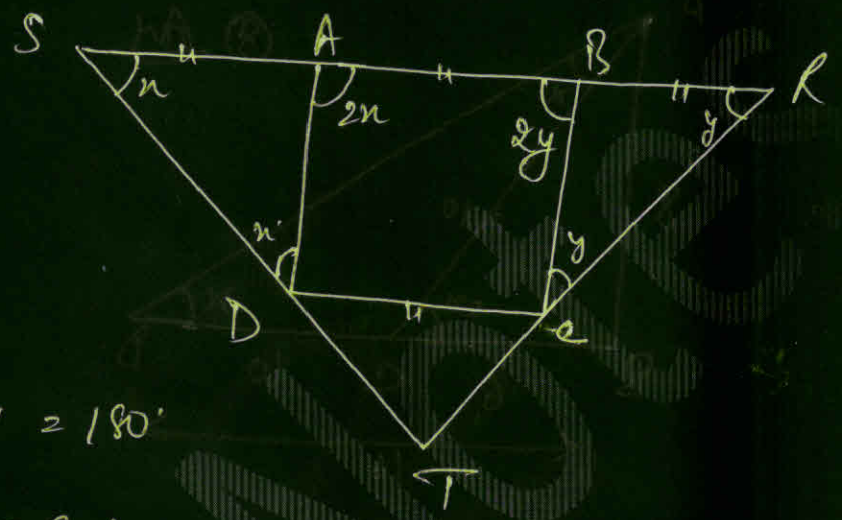
$x = \frac{80}{3}$

$\angle C = 2x \Rightarrow 2 \times \frac{80}{3}$

$x = \left(\frac{160}{3}\right)$ Ans

Q:- A, B, C, D is Khombus side AB and BA are extended upto point R & S & the extended parts of side RC & SD meets at points T. if SA = AB = BR then find LT = ?

Soln:-



$2x + 2y = 180°$

$x + y = 90°$

In ΔSTR

$\Rightarrow \underline{LS + LR + LT}$

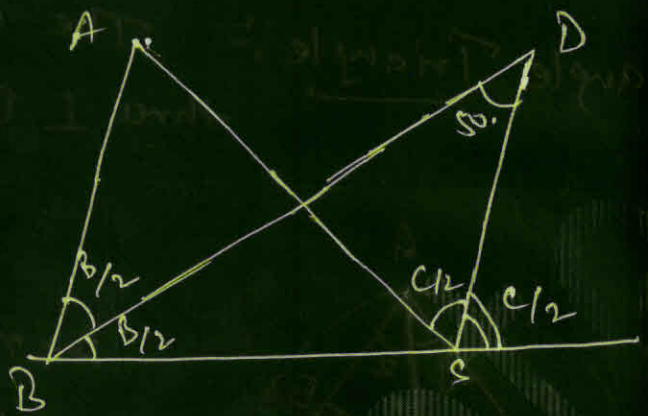
$x+y \quad + LT$

$\Rightarrow LT + x + y = 180°$

$\Rightarrow LT + 90 = 180°$

$\Rightarrow LT = \underline{90°}$ Ans

Q:- The Angle bisector of Internal $\angle B$ & external $\angle C$ of ΔABC meets each other at point D. $\angle D$ is 50° then find the $\angle A = ?$



$$\angle C = \angle A + \angle B$$

$$\frac{\angle C}{2} = \frac{B}{2} + 50$$

$$\angle C = B + 100$$

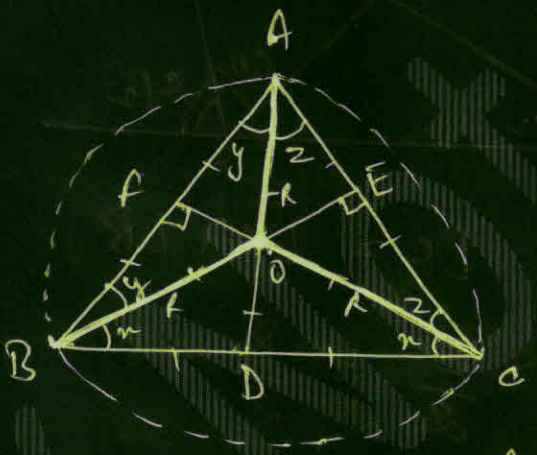
$$A + B = B + 100$$

$$\boxed{A = 100}$$ Ans

* Centres of Triangle :-

① Circum Centre :- The common point of all three ⊥ Bisector of Triangle

① Acute angle Triangle :- The common point of three ⊥ Bisector of a Δ.



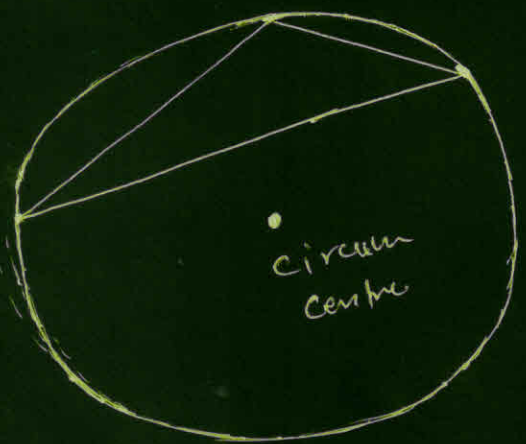
A + x = 90°

C + y = 90°

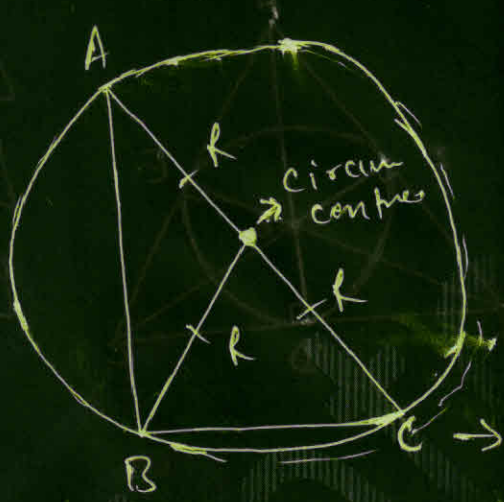
B + z = 90°

AO = BO = CO = Circum Radius

② Obtuse Angle Δ :- In obtuse Angle Δ its the Circum Centre will be outside the Δ.



③ Right Angle triangle :- In a right angle Triangle Δ the circum centre will be at the mid of Hypotenuse

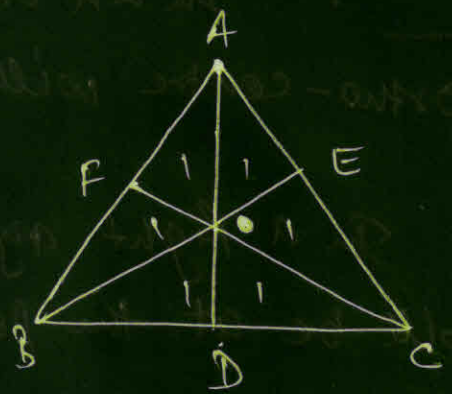


→ C always touch circum centre.

→ Each & every angle drawn by the diameter in the Semi circle will always be 90°

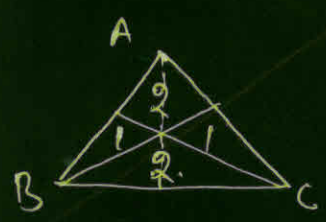
② Centroid :-

→ A common point drawn by all three midians of a Δ.



AO : OD
BO : OE
CO : OF
2 : 1.

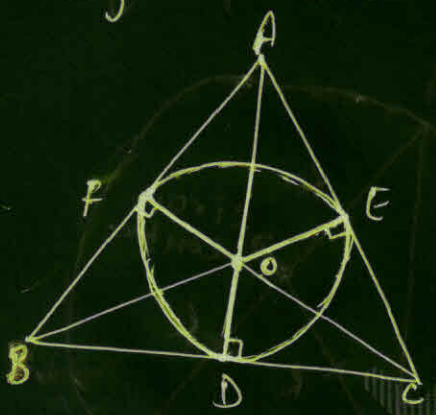
① 

② 

③ 

③ In-Centre :-

→ A Common point of all three Angle Bisectors of Triangle Δ.



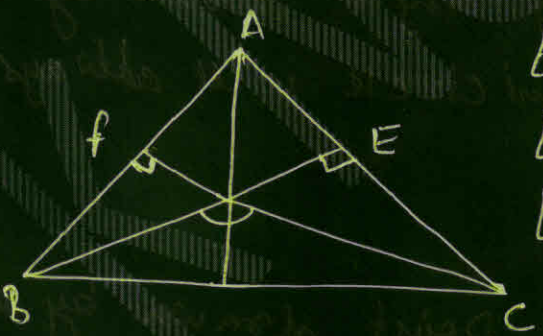
$\angle BOC = 90° + \frac{\angle A}{2}$

$\angle AOB = 90° + \frac{\angle C}{2}$

$\angle AOC = 90° + \frac{\angle B}{2}$

④ Ortho Centre :-

O → A Common point of all three ⊥ of a Δ.



$\angle A + \angle BOC = 180°$

$\angle B + \angle AOC = 180°$

$\angle C + \angle AOB = 180°$

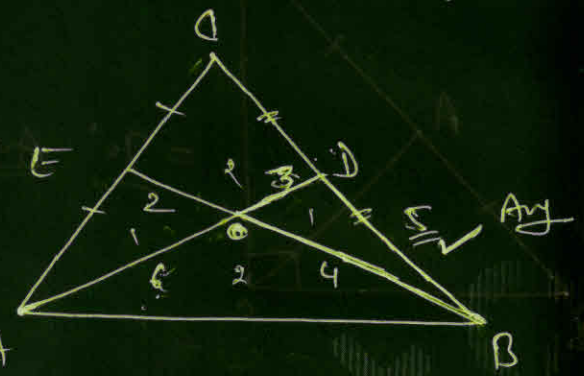
⑨ Obtuse Angle Δ :- In an obtuse Angle Δ the ortho-centre will be outside the Δ.

⑬ Right Angle Δ :- In a Right angle Δ the ortho centre will be at the point of right Angle.

Right Angle Δ

Q: Two median AD & BE of ΔABC Intersect each other at right angle. If AD 9cm & BE 6cm then find BD.

Sol^n :



Pythagorus Triplet :

$(OB)^2 + (OD)^2 = (BD)^2$

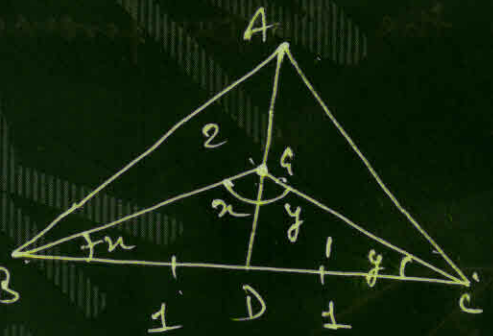
$(4)^2 + (3)^2 = (BD)^2$

$16 + 9 = (BD)^2$

$25 = BD^2$

$BD = 5$ Ans

Q: In a triangle ABC and G is centroid such that $AG = BC$ find $\angle BGC$.



$AG = BC = 2$

ΔBGC

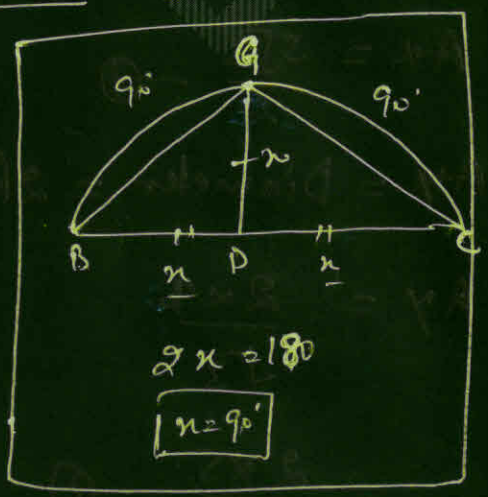
$\angle B + \angle G + \angle C = 180$

$x + x + y + y = 180$

$2x + 2y = 180$

$x + y = 90$

Trick

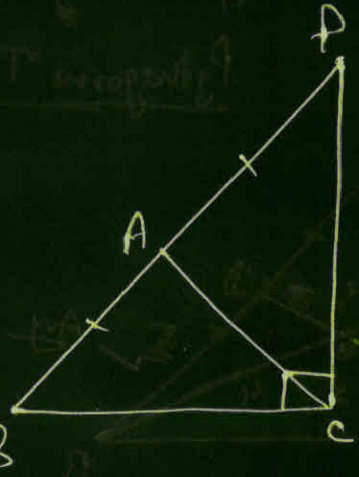


$2x = 180$

$\boxed{x = 90^\circ}$

Q1: In a ΔABC, $AB = AC$ the side BA is extended upto point P. Such that $AP = AC$. Find $\angle PCB$?

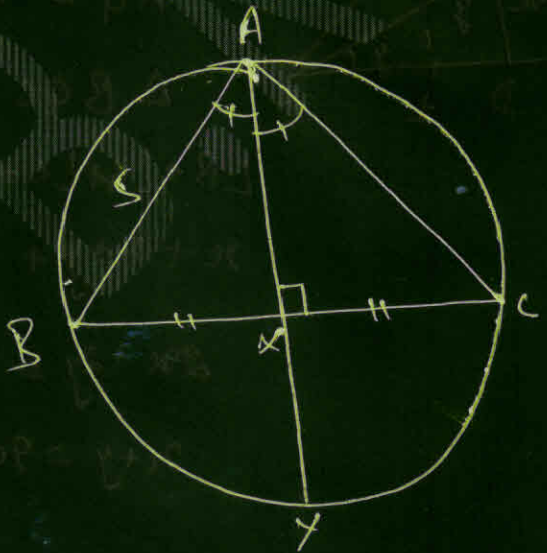
Soln:



$= 90°$ Ans

Q2: ABC is an equilateral Δ. drawn in side a circle $AB = 5$ cm. the Bisector of Angle $\angle A$, meets BC At point x. & the Circumference at point y. find Ax into Ay.

Soln:-



$Ax = \frac{\sqrt{3}}{2} a$

$Ax = \frac{5\sqrt{3}}{2}$ —①

Ay = Diameter = $2R$

$Ay = \frac{2 \times a}{\sqrt{3}}$

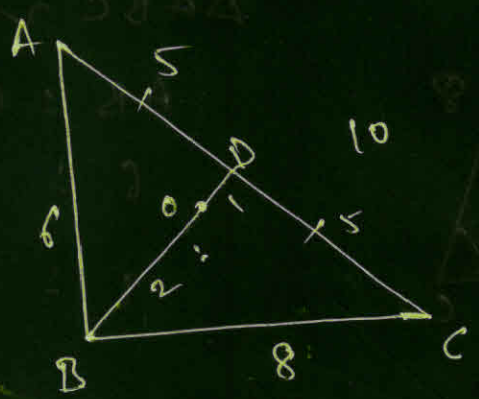
$Ax \cdot Ay$

$\frac{5\sqrt{3}}{2} \times \frac{2 \times 5}{\sqrt{3}} = 25$ Ans

$\frac{2 \times 5}{\sqrt{3}}$ —②

Q: In a ΔABC $AB = 6cm$, $BC = 8cm$ & $AC = 10cm$ O. is the centroid. find $BO = ?$

Soln:-



always use 2 : 1 when Point nearest on Second Point.

$BO : OD$

$2 : 1 = 3$ — 5

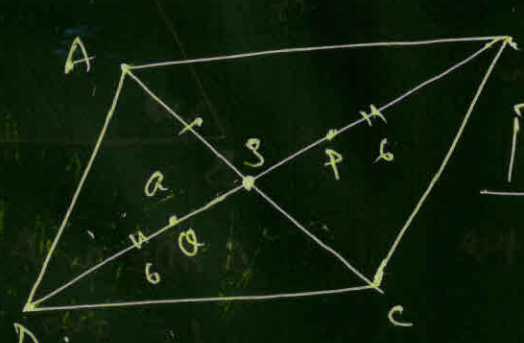
$\times 5/3$

$5/3$

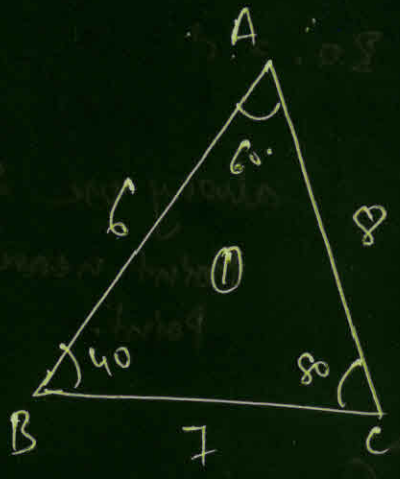
$\frac{10}{3}$ Ans

Q: the length of diagonal BD of ||gm (Parallelogram) ABCD is 18cm P & Q are centroid of Δ. ABC & ADC. find the length $PQ = ?$

Soln:-



$PQ = 6$ Ans

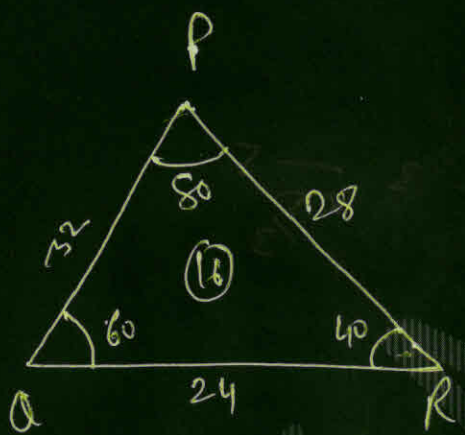


$\Delta ABC \sim \Delta PQR$

$AB : QR$

$6 : 24$

$1 : 4$



$$\frac{\text{Area of } \Delta ABC}{\text{Area of } \Delta PQR} = \left(\frac{AB}{QR}\right)^2 = \left(\frac{BC}{PR}\right)^2 = \left(\frac{AC}{PQ}\right)^2$$

Q)- In a ΔABC D & E are two points on AB & AC such that

$AD = 4\text{ cm}$

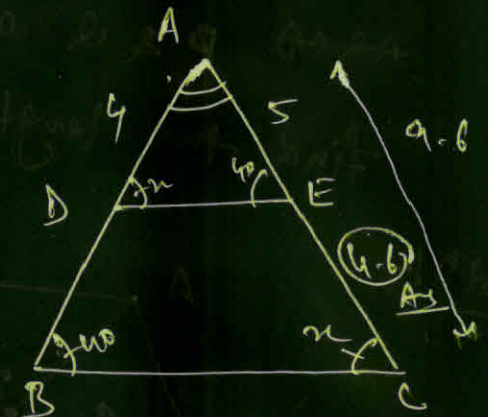
$AE = 5\text{ cm}$

$AB = 12\text{ cm}$

$\angle B = 40$

$\angle CED = 140$

$\angle EC = ?$



$\Delta ADE \sim \Delta ABC$

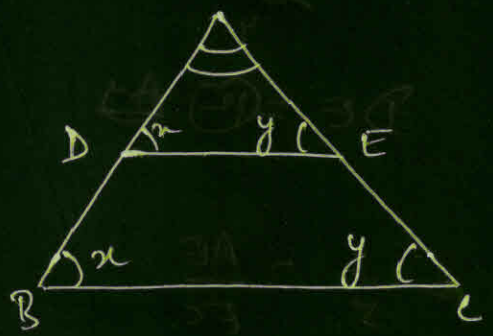
$\angle E = 40$

$\angle A = \angle A$

$$\frac{AC}{AD} = \frac{AB}{AE} \qquad \frac{AC}{4} = \frac{12}{5}$$

$$AC = \frac{48}{5} = 9.6$$

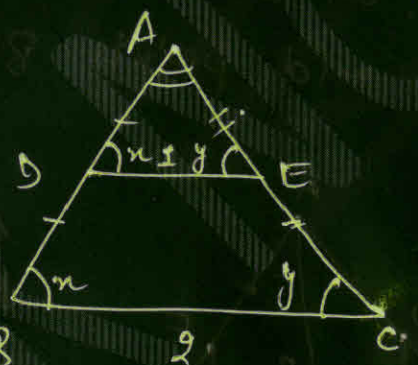
① Property: In a triangle ABC, DE // BC



$$\frac{AD}{AB} = \frac{AE}{AC} = \frac{DE}{BC}$$

$$\boxed{\frac{AD}{BD} = \frac{AE}{EC}}$$

② In a $\triangle ABC$, D & E are the mid points of AB & AC then.



$\triangle ADE \sim \triangle ABC$

DE // BC

$$\boxed{DE = \frac{BC}{2}}$$

Q1. In a triangle $\triangle ABC$, DE // BC, then.

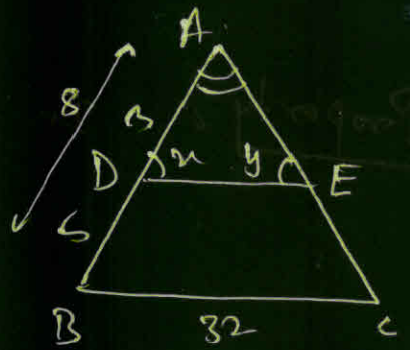
① AD = 3
BD = 5
BC = 32
DE = ?

② AD = 3
BD = 5
EC = 32
AE = ?

A-①

$$\frac{DE}{BC} = \frac{AD}{AB} = \frac{DE}{32} = \frac{3}{8}$$

$$DE = 12 \text{ Ans}$$



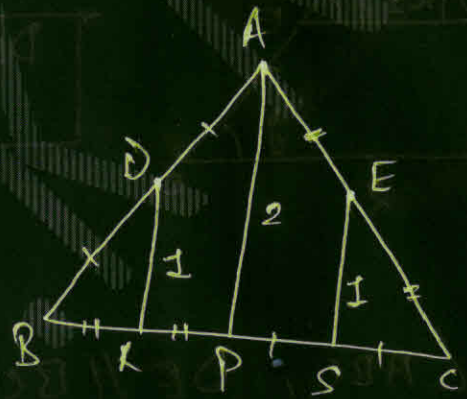
A-2

$$\frac{AD}{BD} = \frac{AE}{EC} = \frac{3}{5} = \frac{AE}{EC}$$

$$\frac{96}{5} = 19.2 \text{ Ans}$$

Q:- In a $\triangle ABC$ D & E are mid points of AB & AC P is a point on BC such that BP : EC is 3:2, R & S are the mid points BP & PC find DR : ES.

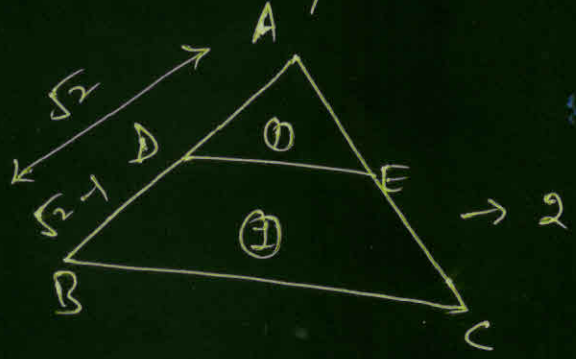
Ans:-



$\triangle APB$ DR : ES

$\triangle APC$ 1 : 1 Ans

Q:- In a $\triangle ABC$ DE || BC such that It divides $\triangle ABC$ into 2 equal area find AD : BD.



$$\sqrt{\frac{1}{2}} = \sqrt{\left(\frac{AD}{AB}\right)^2}$$

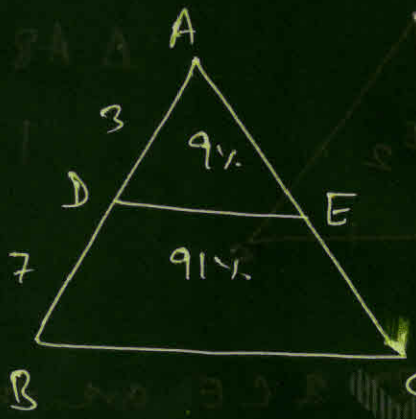
$$\frac{AD}{AB} = \frac{1}{\sqrt{2}}$$

AD : BD

$1 : \sqrt{2}-1$ Ans

Q:- In a $\triangle ABC$ $DE \parallel BC$ Such that AD : BD is 3 : 7. find the Percentage % Area of Quadrilateral BDEF.

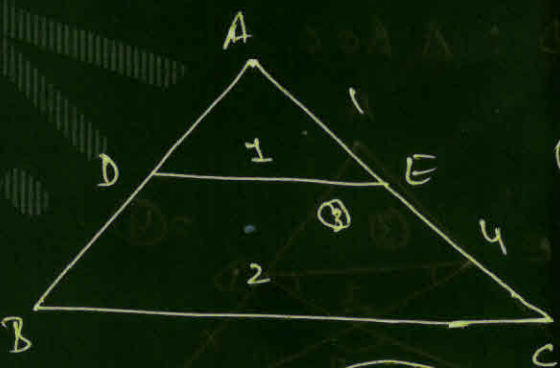
Ans:-



$$\frac{\text{area of } \Delta ADE}{\text{area of } \Delta ABC} = \frac{(AD)^2}{(AB)^2}$$

Q:- In a $\triangle ABC$, D & E are the mid points AB & Ac. then find the % area of Quadrilateral BDEC.

Ans:-

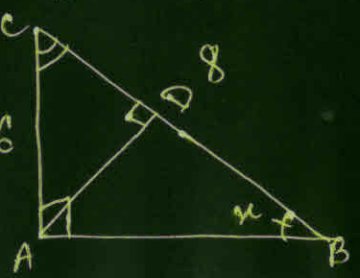


4 - 1 = 3

$3/4 = (75\%)$ Ans

Q:- In a $\triangle ABC$, $\angle A = 90^\circ$, $AD \perp BC$ of $BC = 8$ cm, $Ac = 6$ cm. then find the Ratio of Area of $\triangle ABC$ or $\triangle ACD$.

Soln:-



$\triangle ADC \sim \triangle ABC$

$90 = 90$

$\triangle ABC = \triangle ADC$

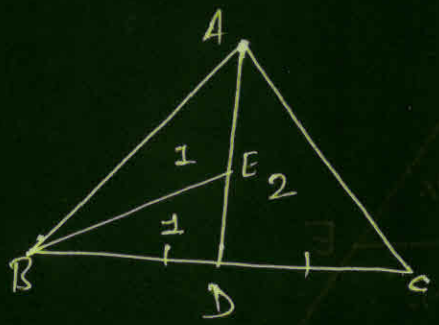
$(8)^2 = (6)^2$

16 : 9

16 : 9 Ans

Q: In ΔABC D is the mid point of BC & E is mid point of AD then find the Ratio of Area of ΔAEB & ΔABC

Soln:



$\Delta ABE : \Delta ABC$

$1 : 4$ Ans

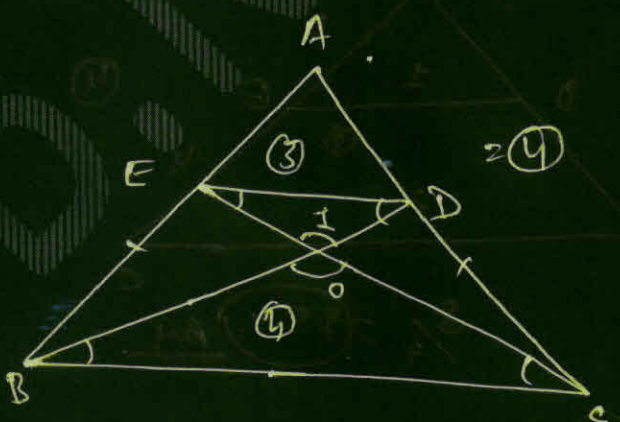
Q: In ΔABC BD & CE are two medians which Intersect each other at point O. find the Ratio of the areas of $\Delta EOD : \Delta BOC$ & ΔAED;

ΔBOC;

① $\Delta EOD : \Delta BOC$

② $\Delta AED : \Delta BOC$

Ans:



$\Delta EOD : \Delta BOC$

$1 : 4$

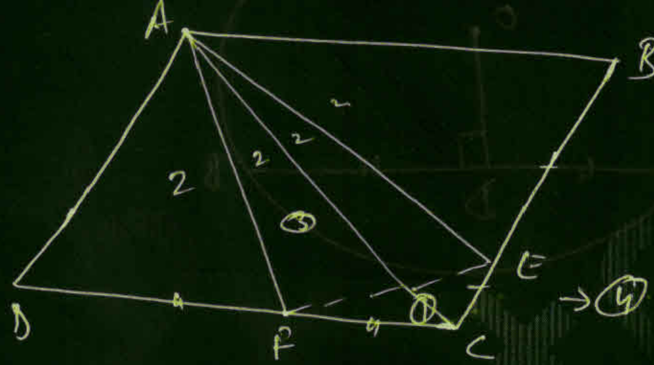
$\Delta AED : \Delta BOC$

$3 : 4$

$\square AEOD = \Delta BOC = 4$

Q :- ABCD is parallogram, E & F are the mid point of BC and CD. find the ratio of area of ΔAFE & ΔEFC.

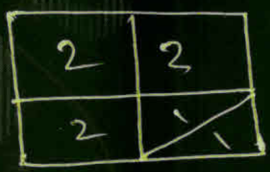
Ans



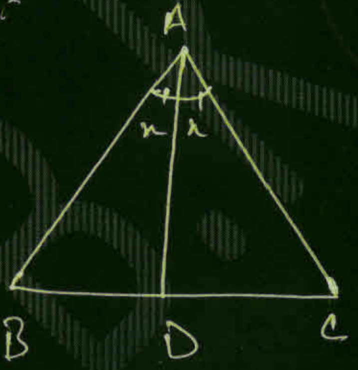
$\Delta AFE : \Delta EFC$

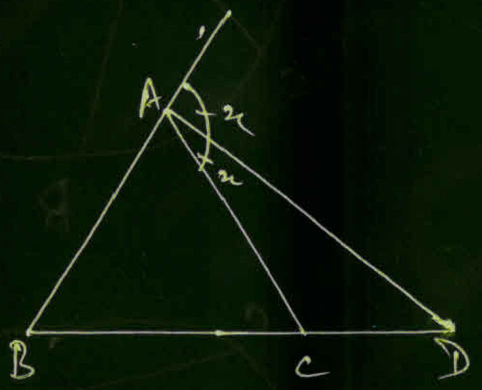
3 : 1

Ans



⇒ Property :-





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

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

Q :- In ΔABC. $AD \perp BC$ & $EC \perp AE$

then if

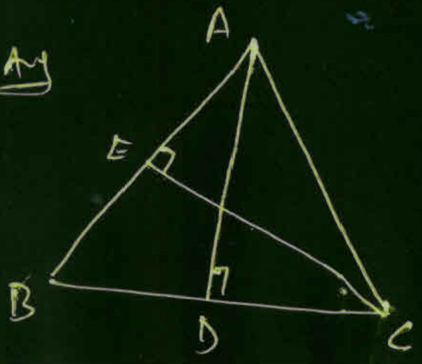
AB = 16

CE = 24

BC = 32

AD = ?

Ans

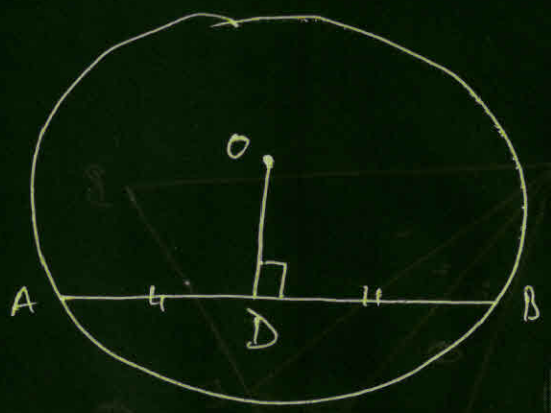


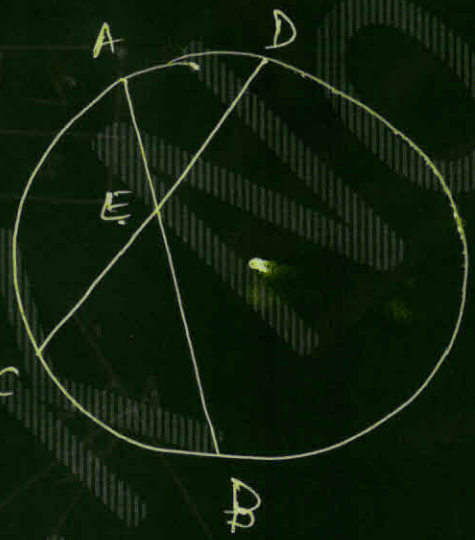
$\frac{1}{2} \times BC \times AD = \frac{1}{2} AB \times CE$

$\cancel{32} \times AD = \cancel{16} \times \cancel{24}$ (2, 12)

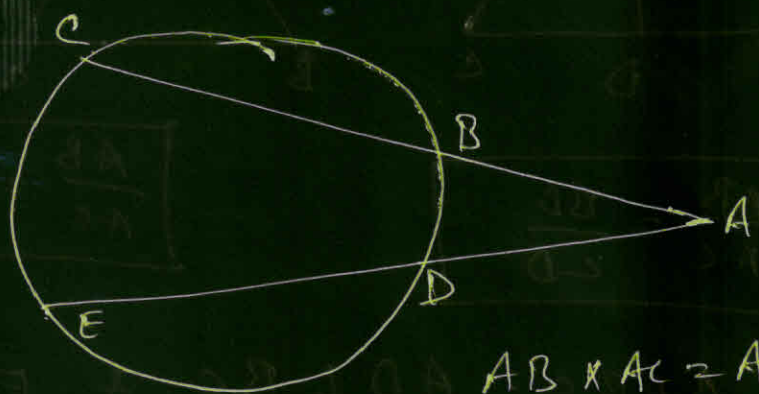
AD = 12 Ans

Circle

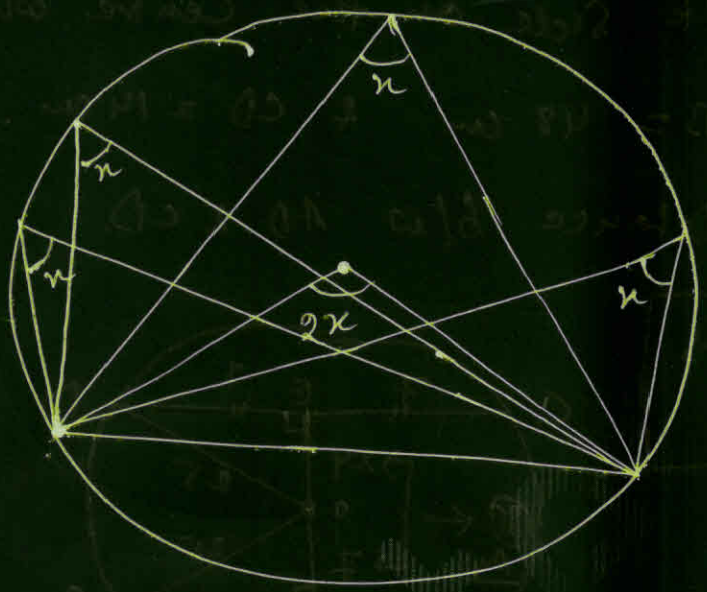


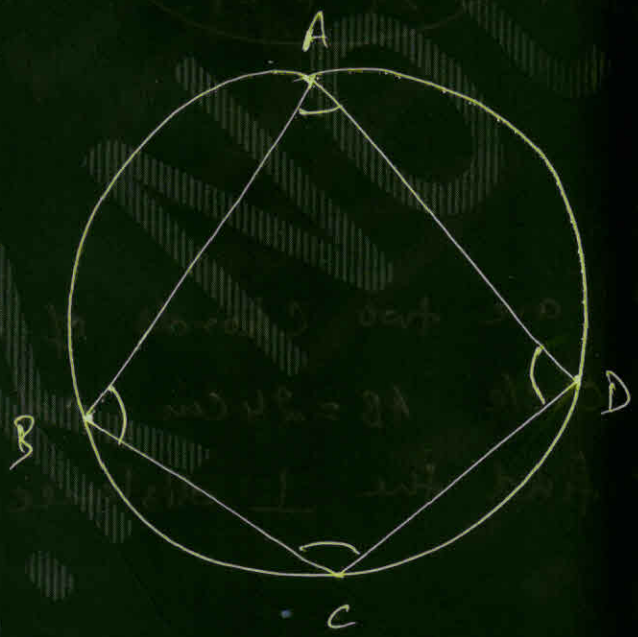


$AE \times EB = CE \times ED$



$AB \times AC = AD \times AE$





$\angle A + \angle C = 180°$

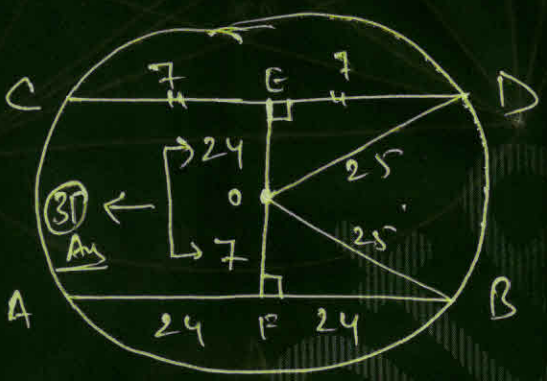
$\angle B + \angle D = 180°$

Q:- AB & CD are two chords of the circle of the opposite side on the centre which radius 25 cm. AB = 48 cm & CD = 14 cm. find the ⊥ distance b/w AB & CD.

Soln :-

Learn Pythagorus Triplate

7, 24, 25



$(ED)^2 + (OD)^2 = (OE)^2$

$(7)^2 + (25)^2 = (OE)^2$

$49 + 625 = (OE)^2$

$(576)^2 = (OE)^2$

$24 = OE$

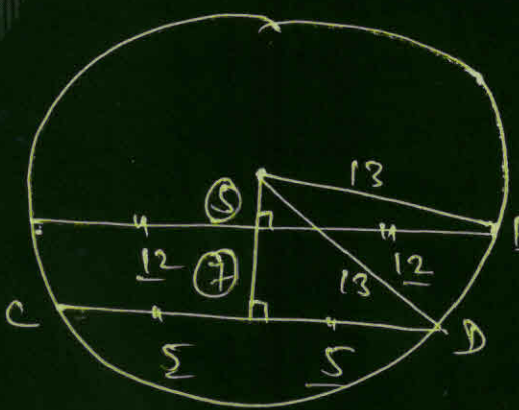
$7 = OF$

$OE + OF$

$24 + 7 = 31$ Ans

Q:- AB & CD are two chords of the on the same side of circle AB = 24 cm, cd = 10 cm & radius = 13 cm. find the ⊥ distance. AB & CD.

Soln :-

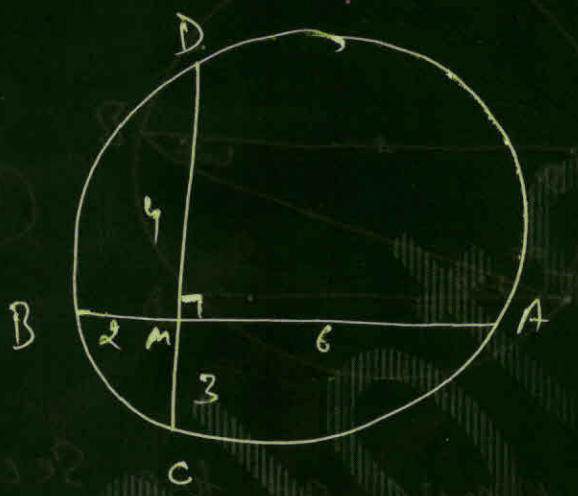


5

7 Ans

Q:- Find the Radius of circle in which AB and CD are 2 chords which Intersect eachother at right angles at point M. If AM = 6 cm, CM = 3cm and MD = 4cm.

Soln:-



$AM \times MB = CM \times MD$

$6 \times MB = 3 \times 4$

$MB = 2$

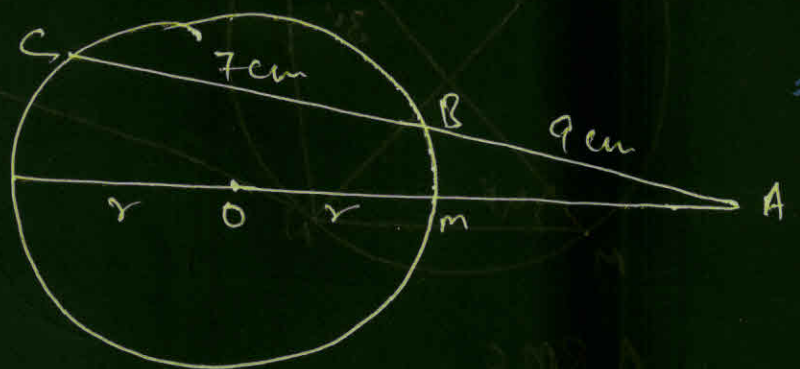
$D = \sqrt{6^2 + 2^2 + 3^2 + 4^2}$

$D = \sqrt{65}$

$R = \frac{\sqrt{65}}{2}$ Ans

Q:- ABC & AMN are two Secant of circle with Centre O. MN is the diameter. If AB = 9cm, BC = 7 cm & AO = 13 cm find the Radius.

Soln:-



$AO = 13$

$AM = 13 - r$

$AN = 13 + r$

$AB \times AC = MA \times AN$

$9 \times 16 = (13 - r)(13 + r)$

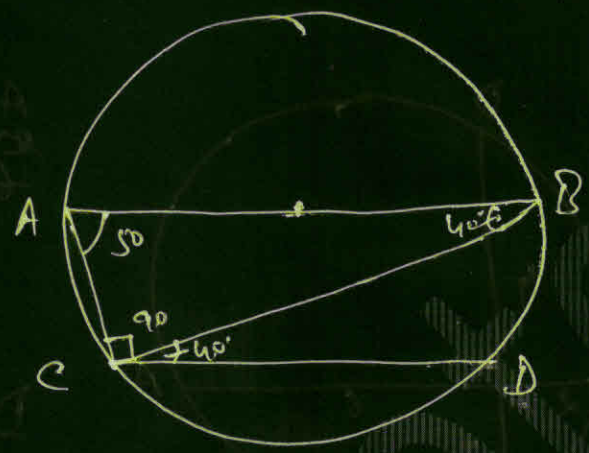
$144 = 169 - r^2$

$+25 = +r^2$

$r = 5$ Ans

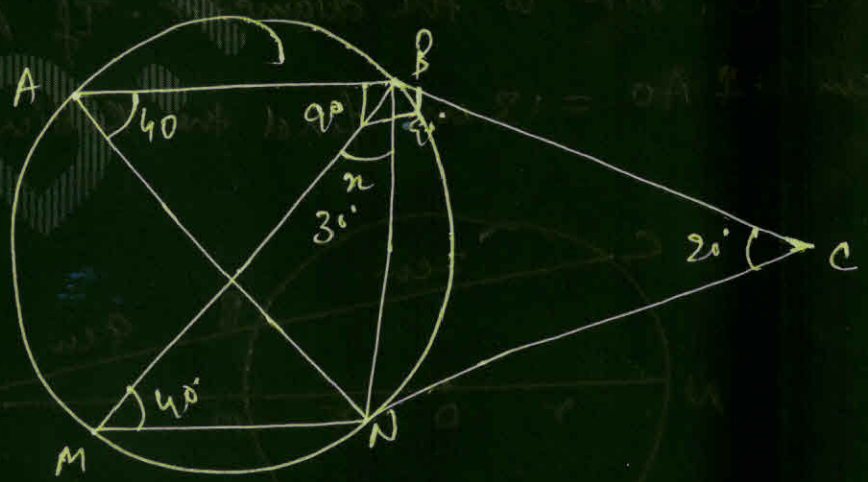
Q: AB is the diameter of the circle & CD is a chord parallel of AB. If Angle $\angle BAC = 50$ then. find $\angle BCD = ?$

Soln



(40) Ans

Q: ABC and MNC are two Secants of the circle with the centre O. AN is diameter $\angle C = 20°$ AND $\angle BAN = 40°$ find $\angle MBN = ?$



ΔBMC

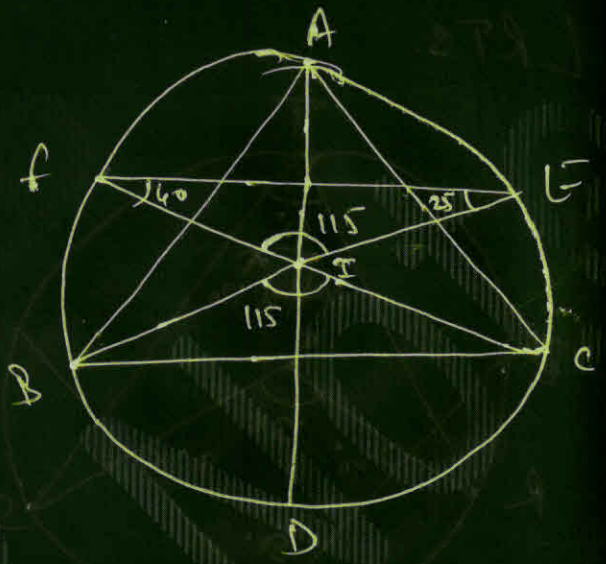
$$\angle M + \angle C + \angle B = 180$$

$$40 + 20 + 90 + x = 180$$

$$\boxed{x = 30}$$ Ans

Q:- ABC is a triangle drawn inside a circle. the Angle bisector of $\angle A$, $\angle B$ and $\angle C$ Intersect the Circumference at the point D, E & F If $\angle A = 50°$ & $\angle CFE = 40°$. find Angle $\angle BEF = ?$

Soln:-



or

$$\angle BIC = 90 + \frac{\angle A}{2}$$

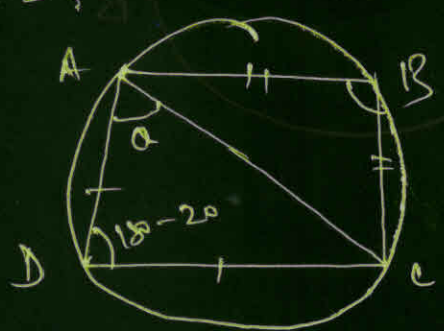
$$\angle BIC = 115°$$

$$\Rightarrow \angle FIE = 115°$$

So, $\angle FEB = 180° - 40 = \underline{140°}$ Ans

Q:- ABC in a cyclic quadrilateral such that $AB = BC$ & $AD = CD$. If Angle $\angle CAD = 20$. find $\angle ABC = ?$

Soln:-



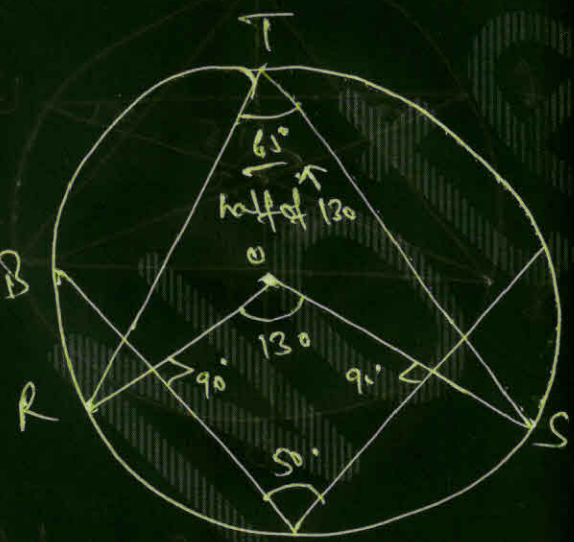
$\angle B + \angle D = 180$

$\angle B + \angle 180 - 20 = 180$

$\boxed{\angle B = 20}$ Ans

Q:- AB & AC are two chords of circle with the centre O. P & Q are mid points of AB & AC. & OP & OQ are extended upto points R & S of the circumference of the circle T is the point on major arc RS. If $\angle A = 50°$. then find $\angle RTS$.

Soln:-



$\angle A + \angle O = 180°$

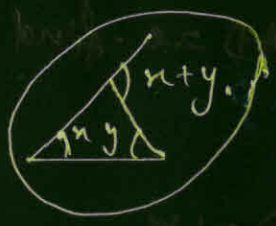
$\angle O = 180 - 50°$

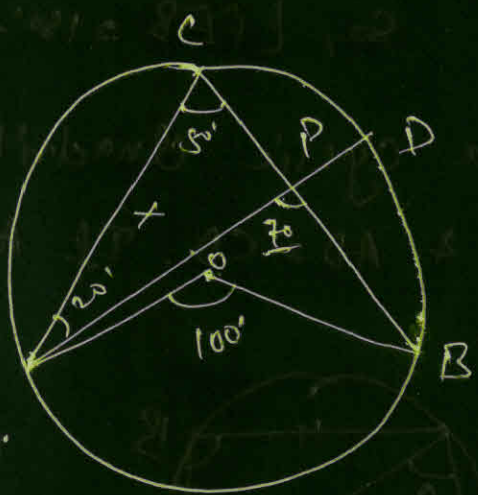
$= 130°$

half of $130°$ is $65°$ that Answer

Q:- AD and BC are two chords of a circle which intersect each other at point P and O is centre. If $\angle AOB = 100°$. $\angle CAD = 20°$ then find $\angle APB = ?$

Soln:-

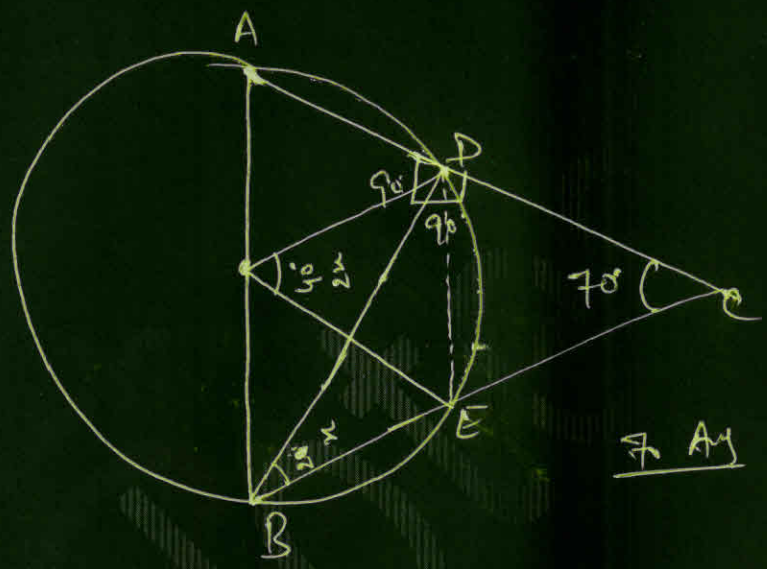




70° Ans

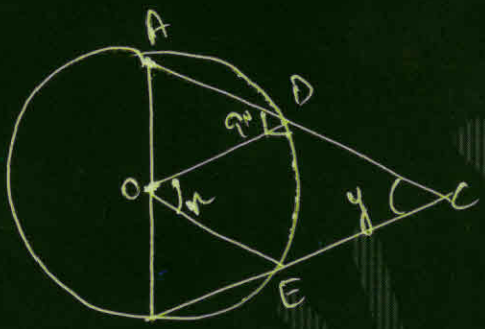
Q:- AB is the diameter & O is centre of circle ADC & BEC are two secants if $\angle DOE = 40°$ then find $\angle C = ?$

Soln:-



Ans

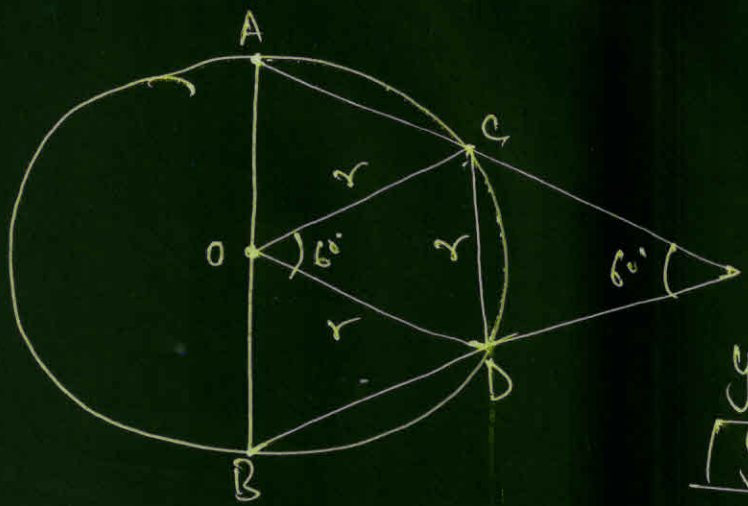
Property



$$y = 90 - \frac{x}{2}$$

Q:- AB is the diameter & O is the centre of the circle. CD is chord parallel as well as half of AB. the sides AC & BD are extended which Intersect each other at point T outside the circle find $\angle T = ?$

Soln:-

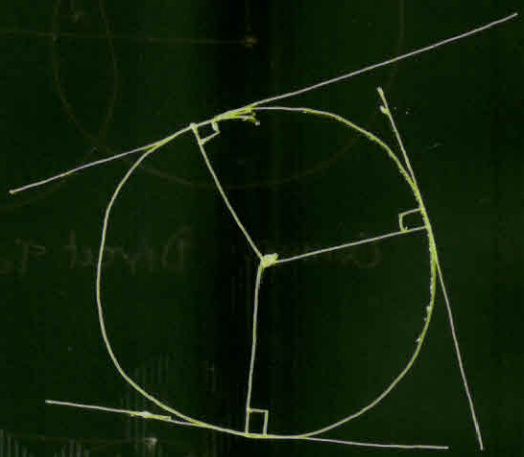


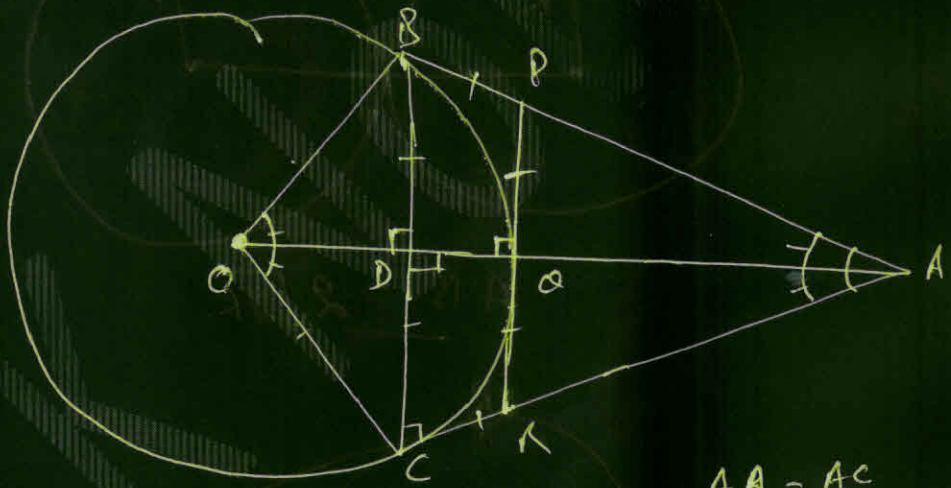
$$y = 90 - \frac{60}{2}$$

$$y = 60°$$

Ans

TANGENT



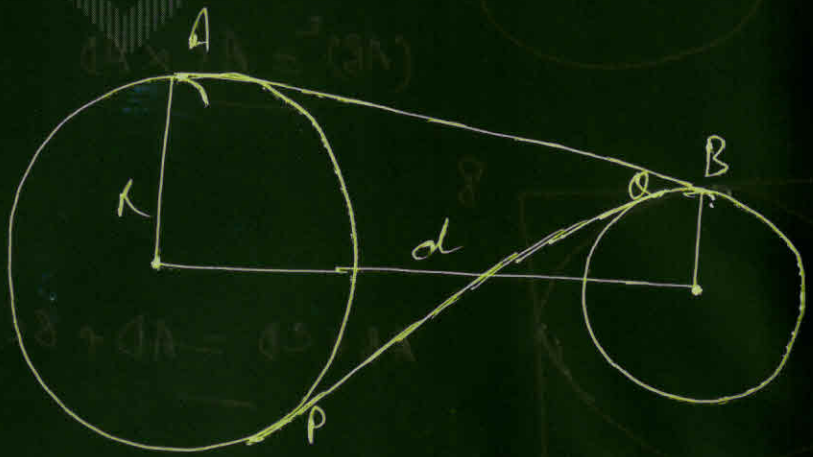


$AB = AC$

$\angle A + \angle O = 180°$

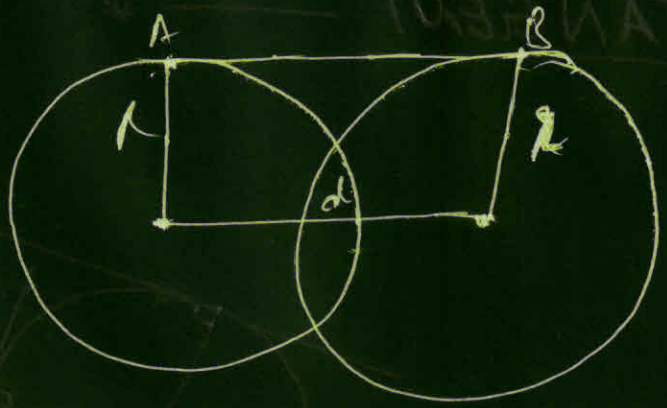
$BD = CD$

$BP = PQ = QR = RC$

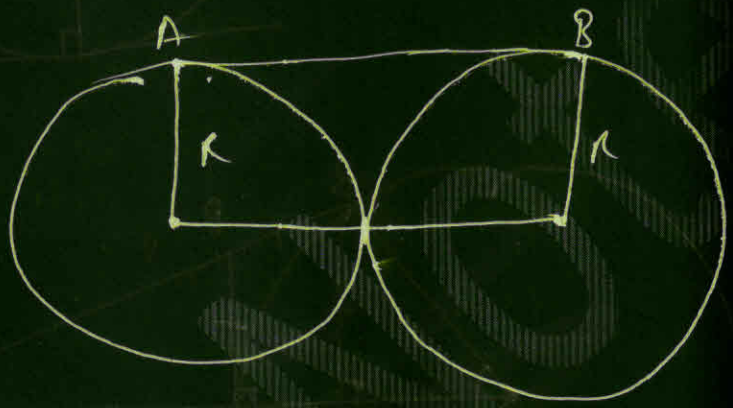


Common Direct Tangent $(AB) = \sqrt{d^2 - (R^2 - r^2)}$

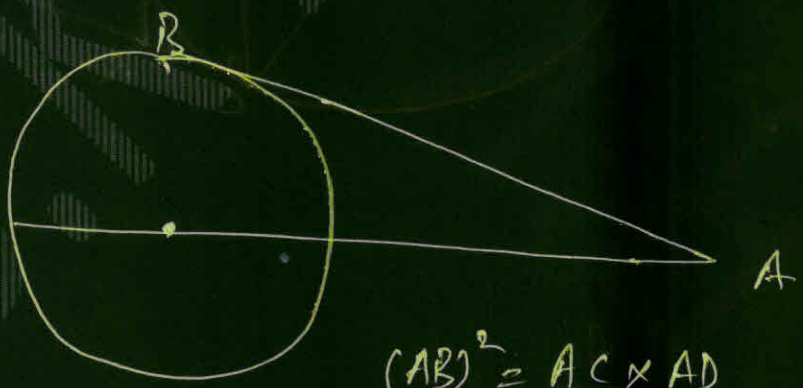
Common Transverse tangent $(PQ) = \sqrt{d^2 - (R + r)^2}$



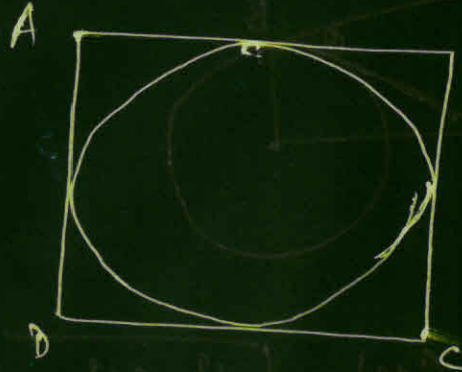
Common Direct Tangent (AB) $= \sqrt{d^2 - (R-r)^2}$



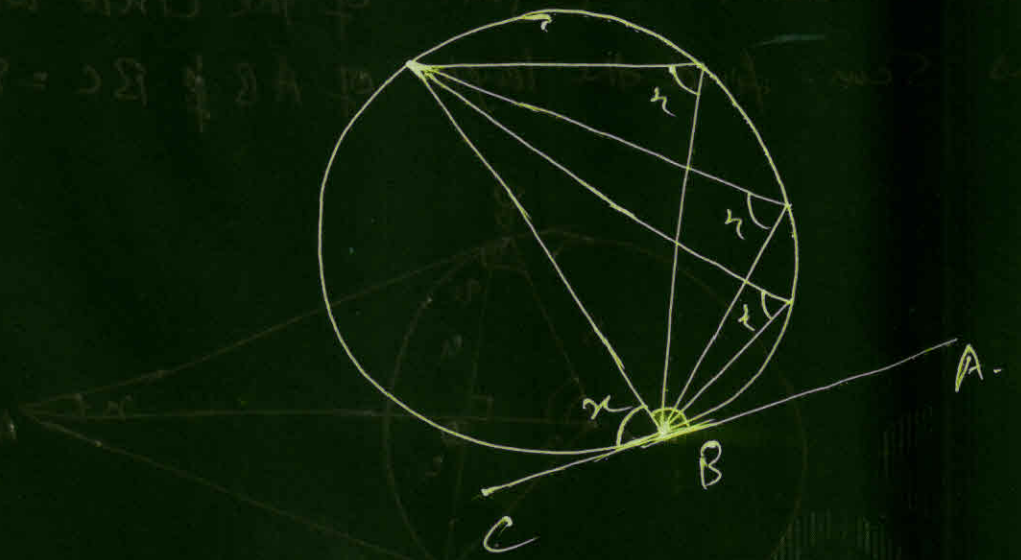
$AB = 2\sqrt{2R}$.



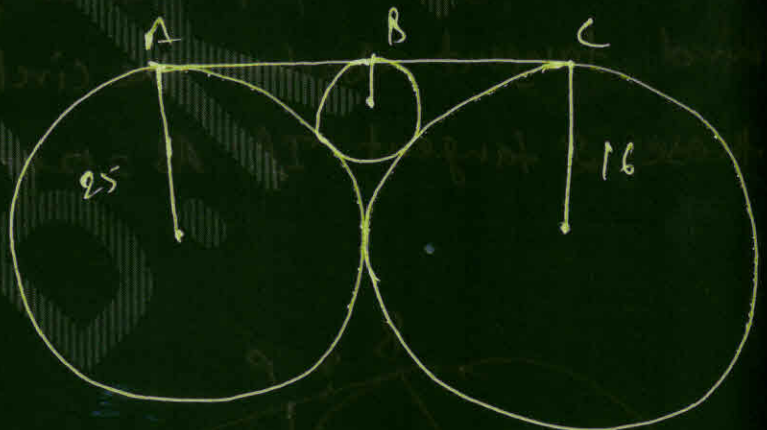
$(AB)^2 = AC \times AD$



$AB + CD = AD + BC$.



Q:- Two circle with the Radius 25 cm & 16 cm touch each other externally a third circle with Radius. x. on touch is those two circle as well as their common tangent. find x.



$AB = 2\sqrt{25 \times x} = 10\sqrt{x}$

$BC = 2\sqrt{16 \times x} = 8\sqrt{x}$

$AC = 2\sqrt{25 \times 16} = 40$

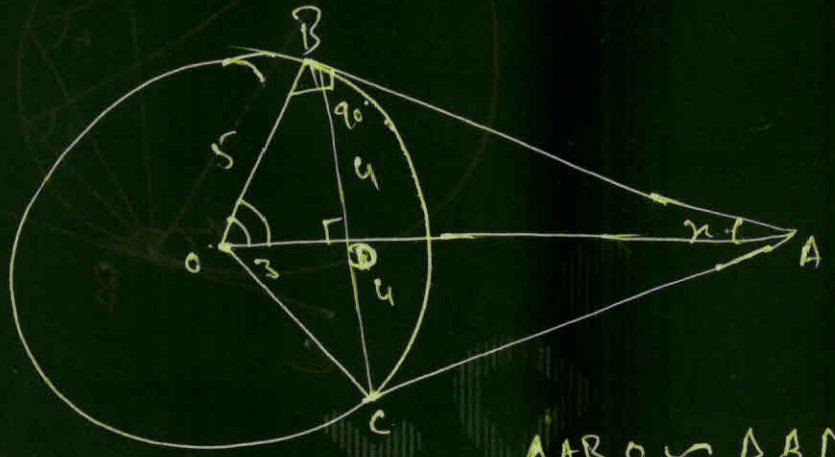
$AB + BC = AC$

$18\sqrt{x} = 40$ (9, 20)

$\sqrt{x} = \frac{20}{9} \Rightarrow \boxed{x = \frac{400}{81}}$ Ans

Q: AB & AC are two tangent of the circle with the radius 5cm. find the length of AB if BC = 8 cm.

Sol^{n}:



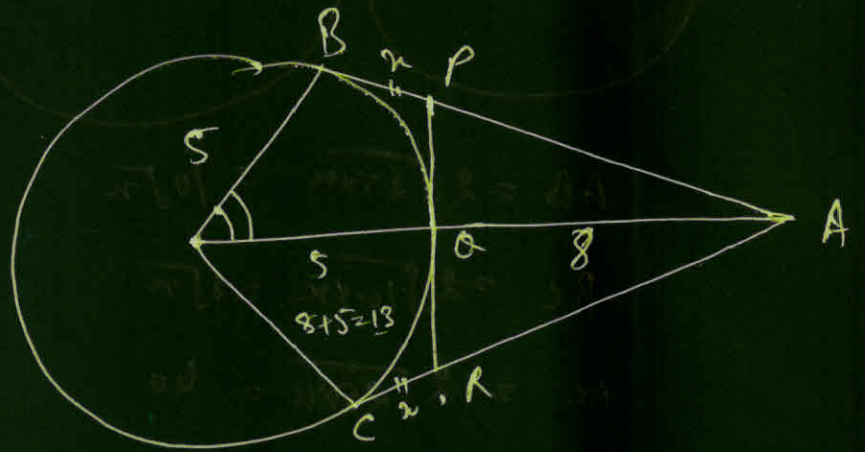
$\Delta ABO \sim \Delta BDO$

$$\frac{AB}{BD} = \frac{BO}{OD}$$

$$\frac{AB}{5} = \frac{4}{3} = \left(\frac{20}{3}\right) \text{Ans}$$

Q: AB & AC are two tangent of the circle find the length of third tangent touches the circle as well as intersect those 2 tangent If AB = 12 cm & radius is 5 cm.

Sol^{n}:



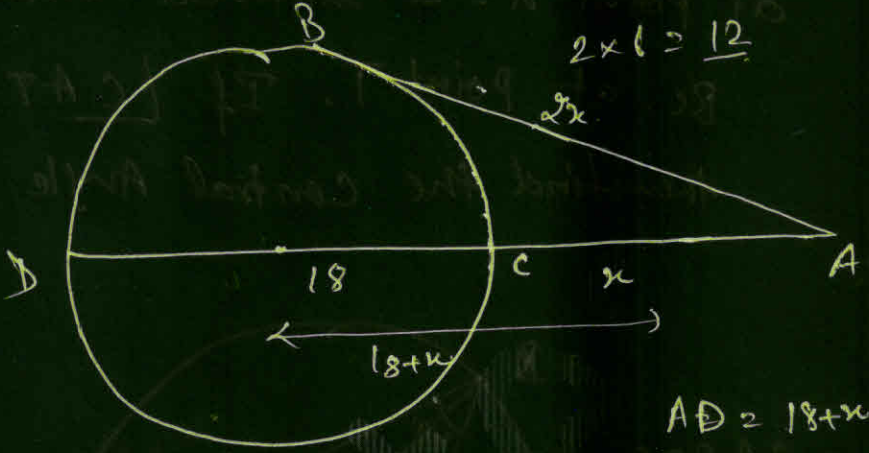
$\Delta ABO \sim \Delta BDO$

$(12-x)^2 = x^2 + 18^2$

$x = \frac{10}{3}$

$PR = \frac{10}{3} + \frac{10}{3} = \left(\frac{20}{3}\right)$ Ans

Q: AB is a tangents. ACD is secant of the circle such that AB = 2AC. and CD = 18 cm find AB.



$AB = 2x$

$AC = x$

$AD = 18+x$

$(AB)^2 = AC \times AD$

$(2x)^2 = x + (x+18)$

$4x^2 = x^2 + 18x$

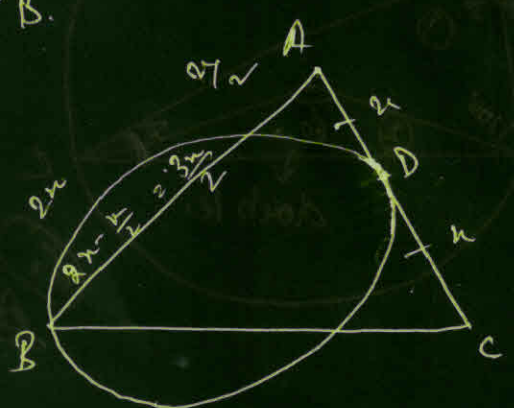
$3x^2 = 18x$

$x = 6$

$2 \times 6 = 12$ Ans

Q: A ABC is a triangle in which AB = AC. A circle passes to point B. & touches side AC at its mid point. D. & Intersect side AB at Point P. find AP Ratio PB.

Soln:



$(AD)^2 = AP \times AB$

$(x)^2 = AB \times 2x$

$AP = \frac{x}{2}$

$AB = AC = 2x$

$AP = PB$

$\frac{x}{2} : \frac{3x}{2}$

$1 : 3$ Ans

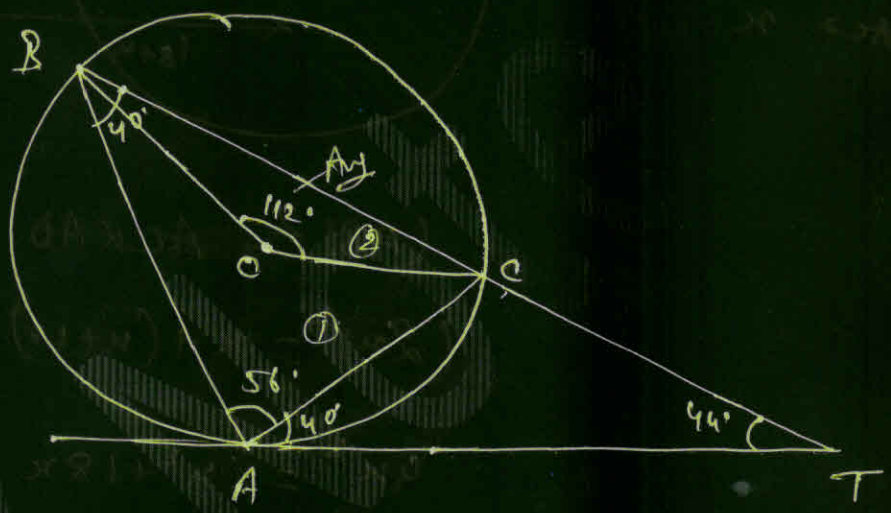
Q:- ABC are Three points of Circumference of the circle such that a tangent touches the circle at point A - & Intersect extended part of Chord Bc. at Point T. If $\angle CAT$ is 40° & $\angle CTA = 44°$ then find the central Angle made by chord Bc.

Ans:

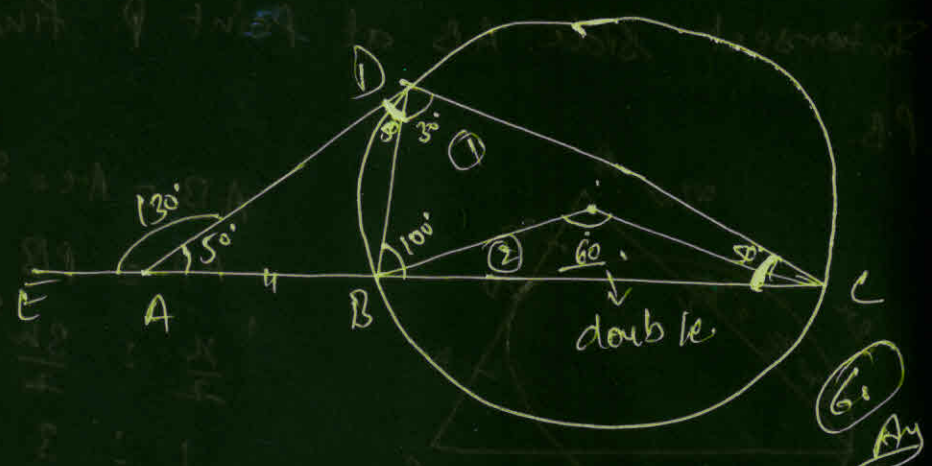
$\Delta BAC = \frac{1}{2} \Delta BOC$

$56 = \frac{1}{2} \times 2$

$56 = 112°$ Ans



Q:- AD is a tangent & ABC is Secant of circle where AB = BD side BA is extended upto point E. & $\angle OAE$ is 130°. then find the central Angle made by chord Bc.



Ans