



MATHS

BOOKS - RS AGGARWAL MATHS (HINGLISH)

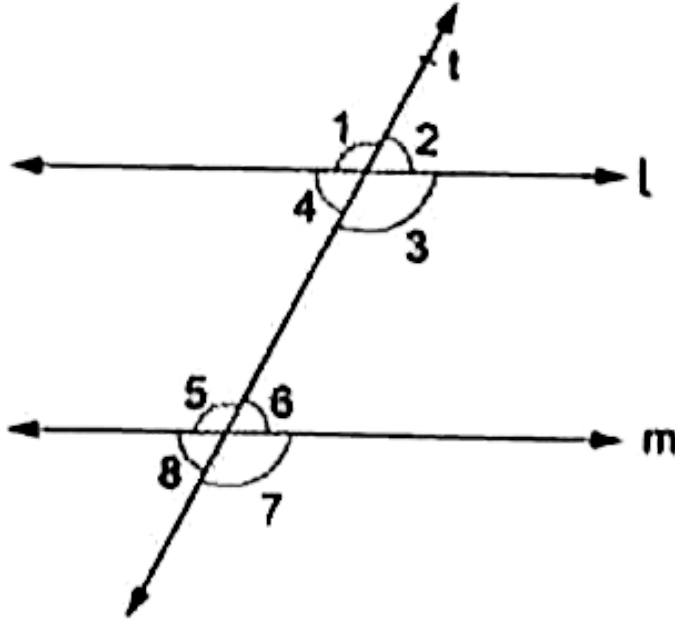
PROPERTIES OF PARALLEL LINE

Example

1. In the given figure l and m are parallel lines and t is a transversal such that $\angle 1 = 135^\circ$

find the measure of each one of the angels

$\angle 2$, $\angle 3$, $\angle 4$, $\angle 5$, $\angle 6$, $\angle 7$. AND $\angle 8$



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2. prove that two lines m and n be parallel to the same given line are parallel to each other.



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3. prove that two lines in a plane which are perpendicular to the same given line are parallel to each other.

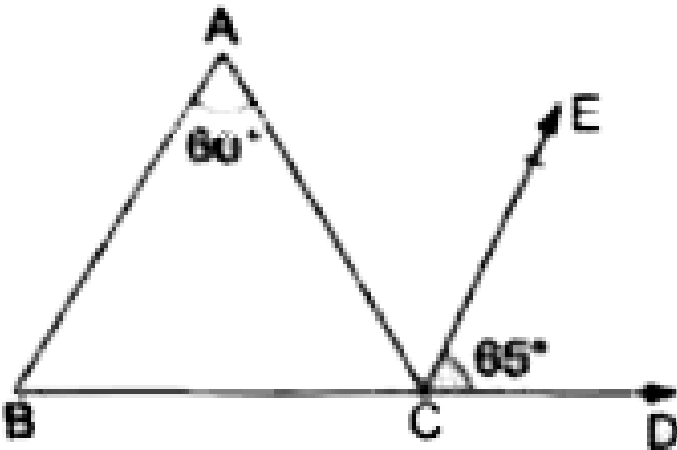


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4. In the adjoining figure it is given that and

$\angle A = 60^\circ$, $CE \parallel BA$ and $\angle ECD = 65^\circ$

Find $\angle ACB$



A. $\text{ANGLE} = 55^\circ$

B. $\text{ANGLE} = 60^\circ$

C. $\text{ANGLE} = 50^\circ$

D. $ANGLE = 65^\circ$

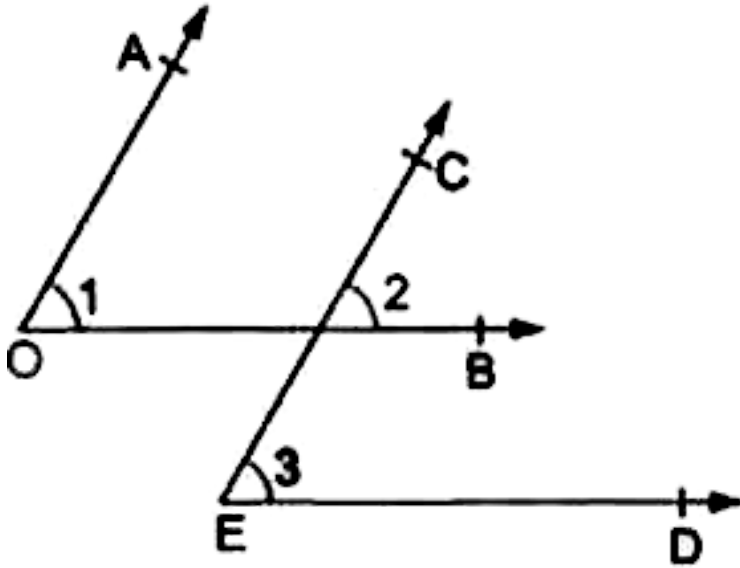
Answer: A



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5. In the adjoining Figure it is given that $OA \parallel EC$ and $OB \parallel ED$ prove that

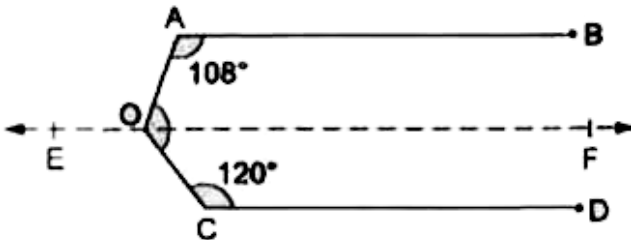
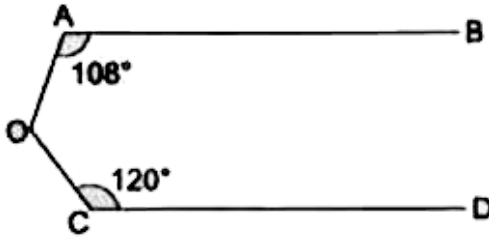
$$\angle AOB = \angle CED$$



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6. In the adjoining figure it is given that $AB \parallel CD$, $\angle BOC = 108^\circ$ and

$\angle OCA = 120^\circ$ Find $\angle AOC$,



- A. $\angle AOC = 140^\circ$
- B. $\angle AOC = 135^\circ$
- C. $\angle AOC = 130^\circ$
- D. $\angle AOC = 132^\circ$

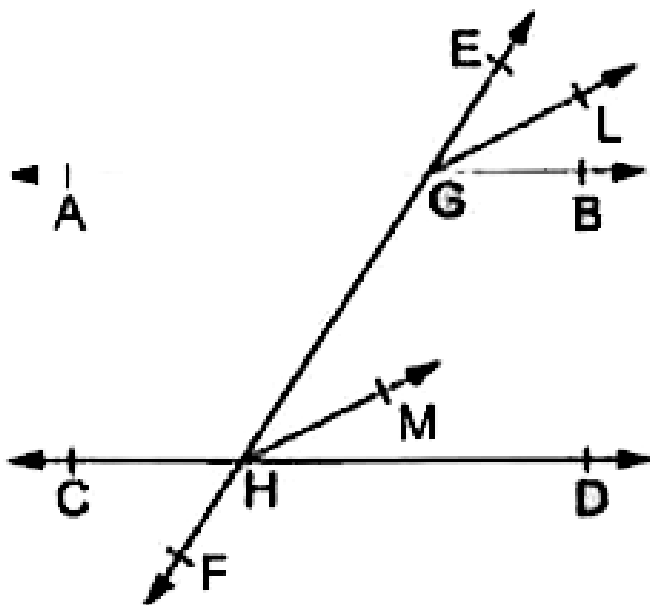
Answer: D



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7. In the adjoining figure $AB \parallel CD$ and EF is a transversal cutting them at G and H respectively. If GL and HM are the bisectors of the corresponding angles EGB and EHD

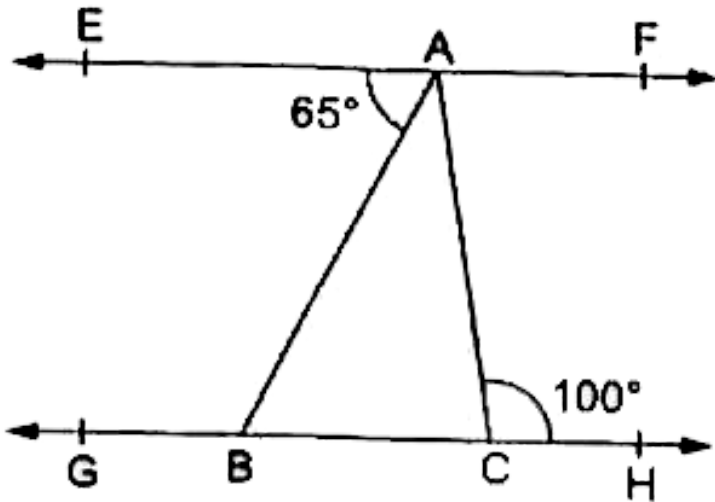
respectively show that $GL \parallel HM$.



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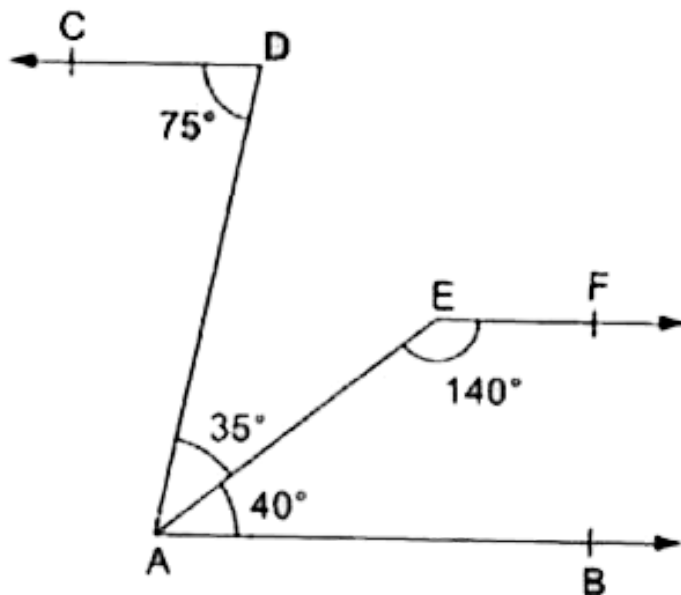
8. In the given figure $EF \parallel GH$,
 $\angle GLB = 65^\circ$ and $\angle ACH = 100^\circ$

determine (1) $\angle abc$, (2) $\angle acb$, (3) $\angle bac$,
(4) $\angle eaf$,



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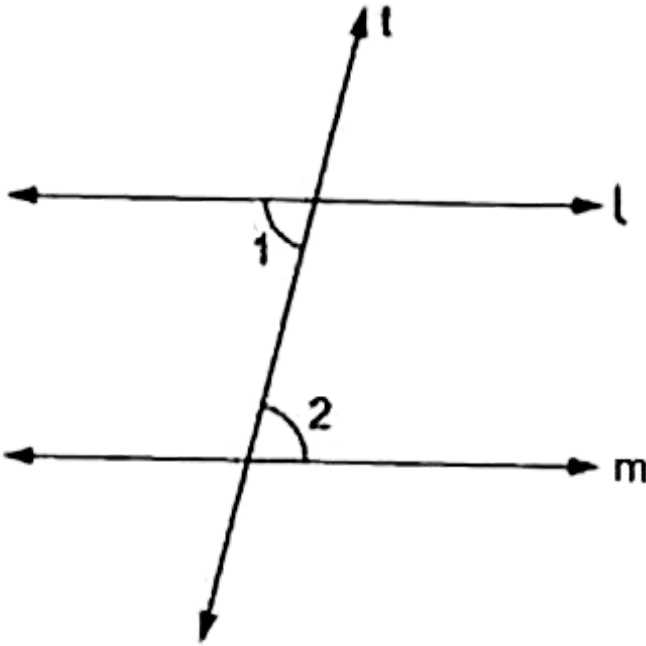
9. In the given figure show that $CD \parallel EF$



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10. In the given figure two lines l and m are intersected by a transversal t such that

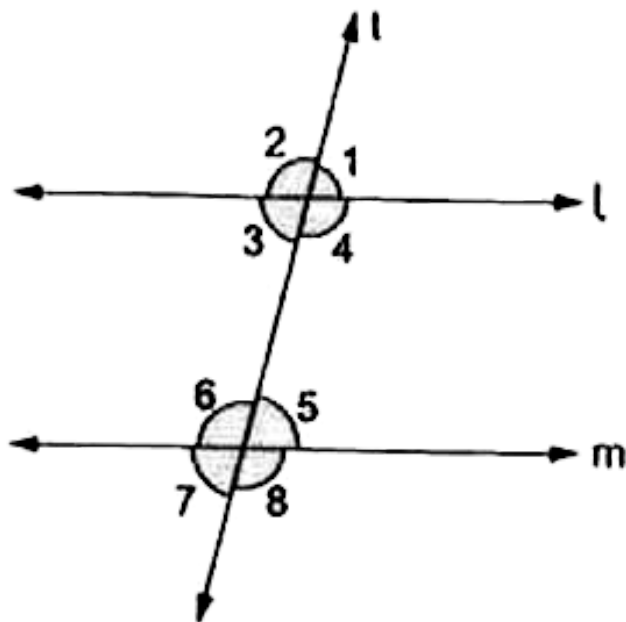
$\angle 1 = \angle 2$ is $l \parallel m$? give reasons



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Exercise 14

1. In the given figure $l \parallel m$ and T is a transversal if $\angle = 70^\circ$ find the measure of the angles $\angle 1$, $\angle 3$, $\angle 4$ and $\angle 8$

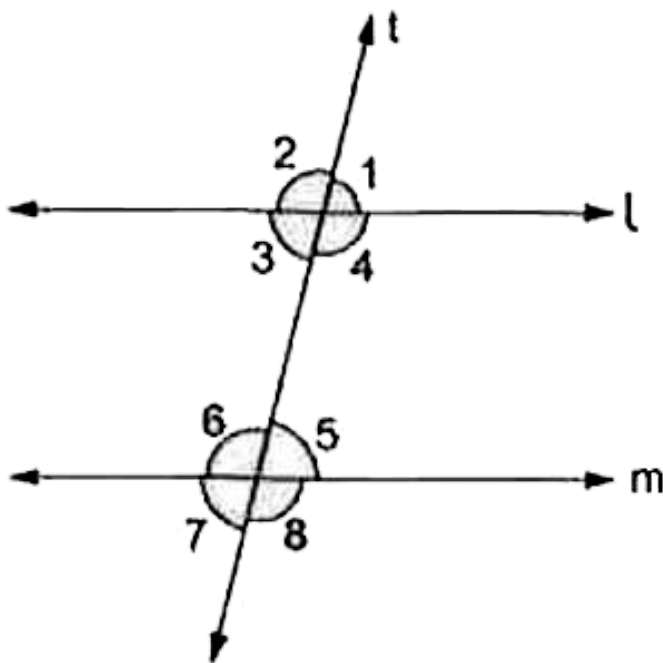


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2. In the given figure

$l \parallel m$ and t is a transversal. If angle 1 and angle 2 are in the ratio 5:7

, find the measure of each of the \angle s Angle 1, angle 2, angle 3 and angle 8.



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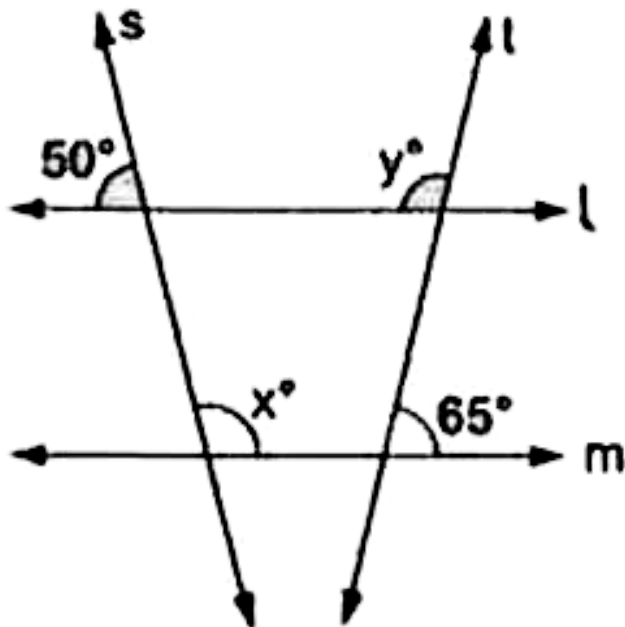
3. Two parallel lines l and m are cut by a transversal t . If the interior angles of the same side of t are $(2x - 8)^\circ$ and $(3x - 7)^\circ$, find the measure of each of these angles.



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4. In the given figure $l \parallel m$ and be transversals such that is not parallel to T find the values of

x and y .



A. $x = 130^\circ$, $y = 115^\circ$

B. $x = 115^\circ$, $y = 130^\circ$

C. $x = 120^\circ$, $y = 125^\circ$

D. $x = 145^\circ$, $y = 150^\circ$

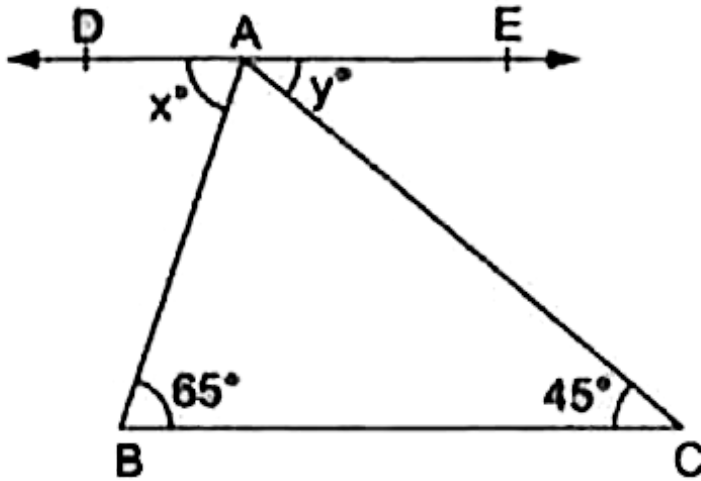
Answer: A



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5. In the given figure $\angle B = 65^\circ$ and $\angle C = 45^\circ$ in $\triangle ABC$ and $DAE \parallel BC$ if $\angle DAB = x^\circ$ and $\angle EAC = y^\circ$ find the

values x and y .



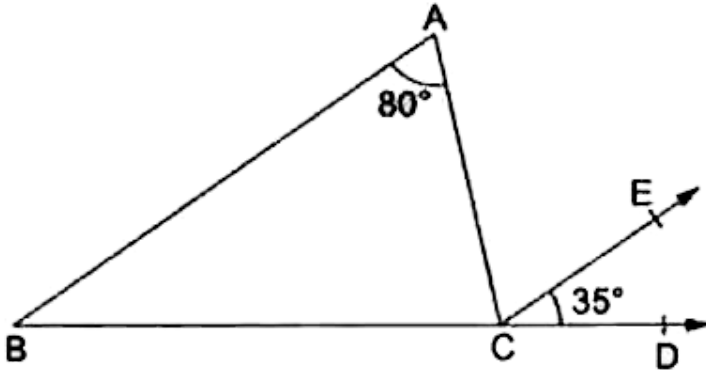
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6. In the adjoining figure it is given that

$CE \parallel BA$, $\angle E = 80^\circ$ and

$\angle ECD = 35^\circ$ find (1) $\angle ACE$, (2)

ANGLEACB , (3) ANGLEABC



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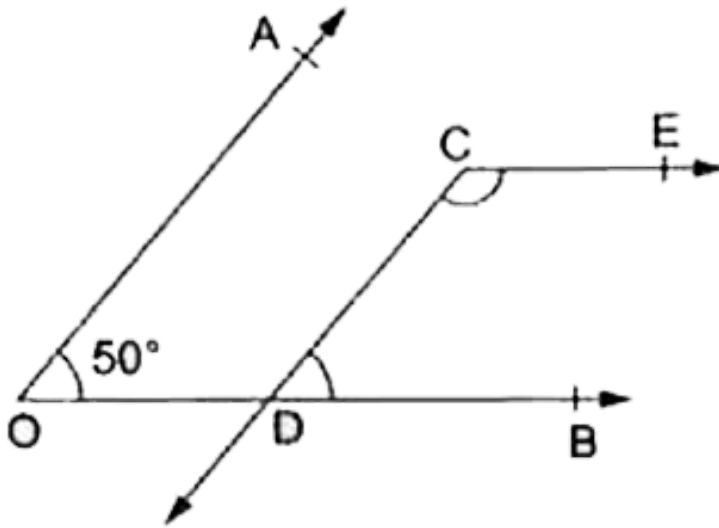
7. in the adjoining figure it is being given that

$AO \parallel CD, OB \parallel CE$

and

$ANGLE = 50^\circ$ find the measure of

ANGLEECD`



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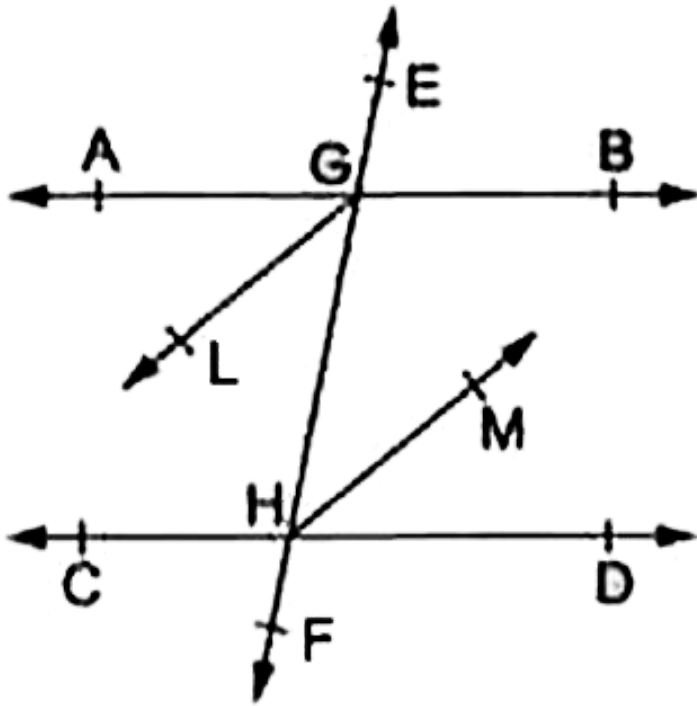
8. In the adjoining figure it is given that $AB \parallel CD$, $\angle ABO = 50^\circ$ and $\angle COD = 40^\circ$ find the measure of $\angle BOD$



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9. In the given figure $AB \parallel CD$ and a transversal EF cuts them at G and H respectively. If GL and HM are the bisectors of the alternate angles $\angle EAGH$ and $\angle GHD$ respectively prove that $GL \parallel HM$

$GL \parallel HM$

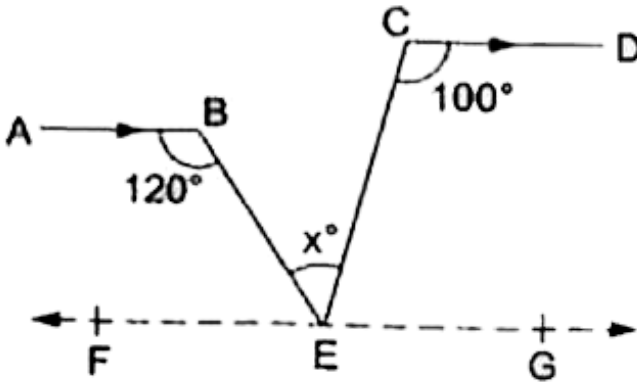


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10. In the given figure $AB \parallel CD$,

$\angle ABE = 120^\circ$, $\angle ECD = 100^\circ$ and

$\angle BEC = X^\circ$. find the value of x .



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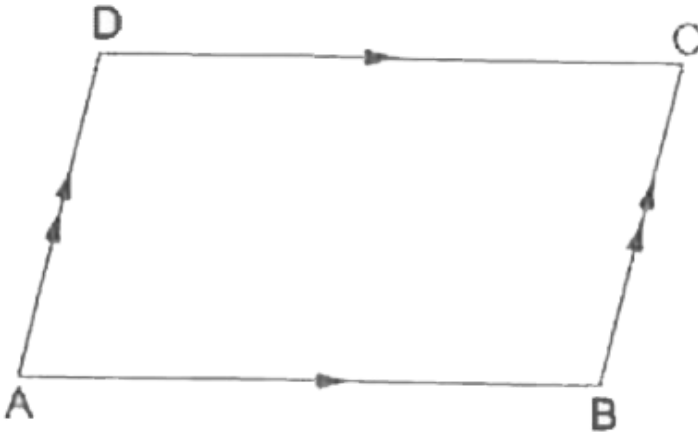
11. In the given figure ABCD is, ABCD is a quadrilateral in which $AB \parallel DC$ and

$AD \parallel BC$

prove

that

$\angle ADC = \angle ABC$.



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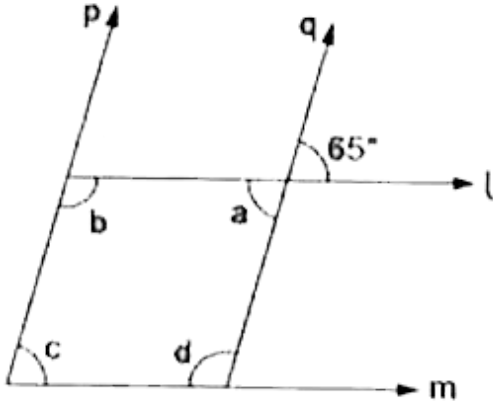
12. In the given figure $L \parallel M$ and $P \parallel Q$

find the measure of each of the angles

$\angle A$, $\angle B$, $\angle C$

and

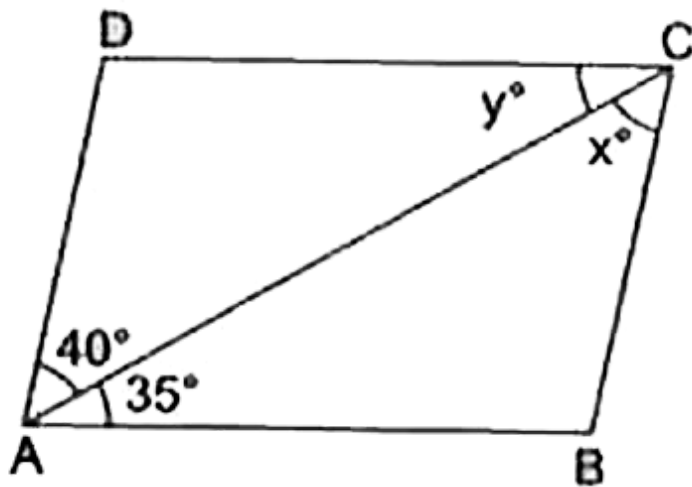
ANGLED.



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13. In the given figure $AB \parallel DC$ and $AD \parallel BC$ and AC is a diagonal if $\angle BAC = 35^\circ$ and $\angle CAD = 40^\circ$, $\angle ACB = X^\circ$ and $\angle ACD = Y^\circ$ find the values of x

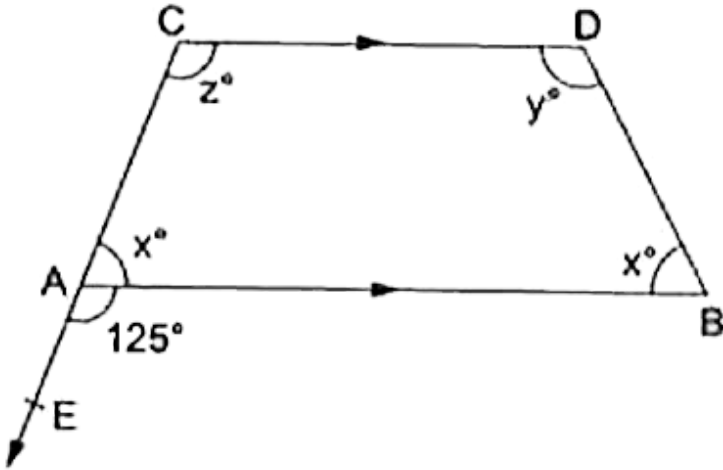
and y .



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14. In the given figure $AB \parallel CD$ and CA has been produced to E so that $\angle BAE = 125^\circ$ if $\angle BAC = X^\circ$, $\angle ABD = X^\circ$, $\angle BDC = Y^\circ$ and $\angle ACD =$

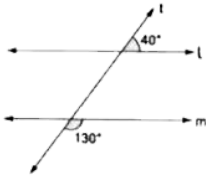
Z° and find the values of x, y, z .



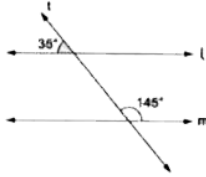
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15. In each of the given figures two lines L and M are cut by a transversal T find whether

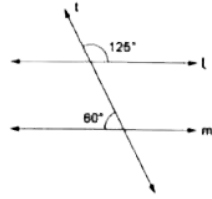
$L \parallel M$.



(i)



(ii)



(iii)



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