

INTERNATIOAL INDIAN SCHOOL-RIYADH

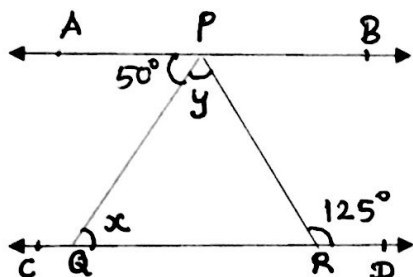
WORKSHEET 2017-18

SUBJECT: Mathematics

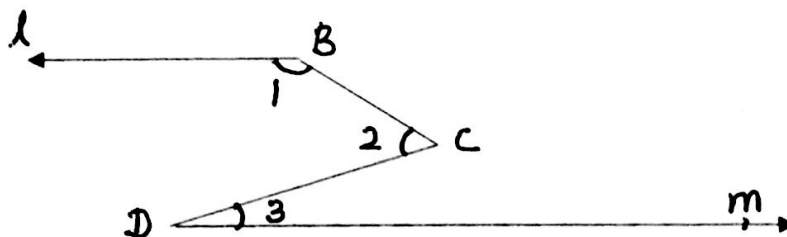
STD: IX

LINES AND ANGLES

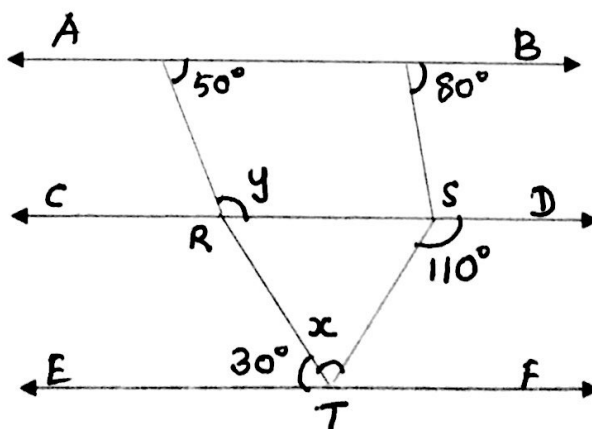
- Is $\triangle ABC$ possible, if $\angle A=60^\circ$, $\angle B=80^\circ$ and $\angle C=40^\circ$?
 - If two complementary angles are $3x+10$ and $7x-20$ then find measures of the angles.
 - In a right angled $\triangle ABC$, if $\angle A=90^\circ$; $\angle B=4y$ and $\angle C=3y+6^\circ$, then Find the value of y .
- In figure, if $AB \parallel CD$, $\angle APQ=50^\circ$ and $\angle PRD=125^\circ$, find $y - x$.



- In figure, $l \parallel m$, prove that $\angle 1 + \angle 2 - \angle 3 = 180^\circ$.

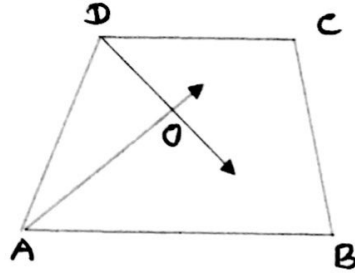


- In given figure, if $AB \parallel CD \parallel EF$, find the value of $(y - x) : (y + x)$.



5. In figure, AO and DO are the bisectors of $\angle A$ and $\angle D$ respectively of the quadrilateral ABCD.

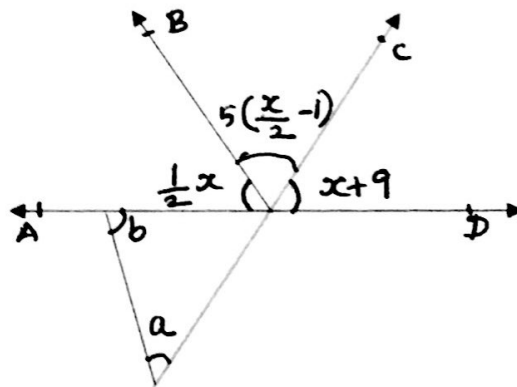
Prove that $\angle AOD = \frac{1}{2}(\angle B + \angle C)$.



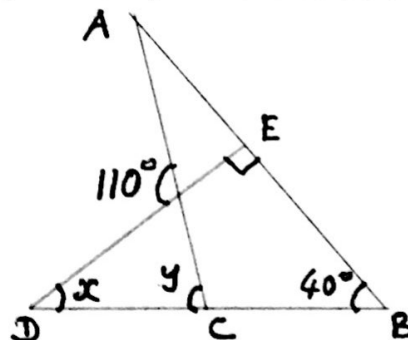
6. Prove that sum of the angles of the triangle is 180° . If in $\triangle ABC$.

$\angle A + \angle B = 120^\circ$ and $\angle B + \angle C = 100^\circ$, then find $\angle B$.

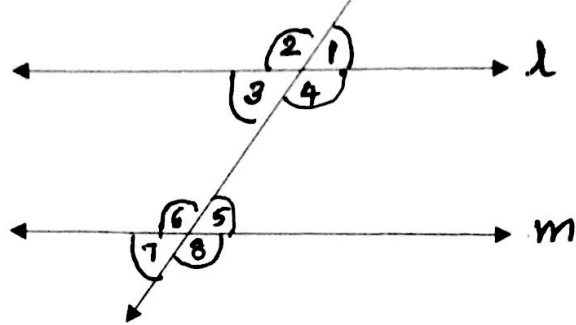
7. In the given figure, find $a + b$.



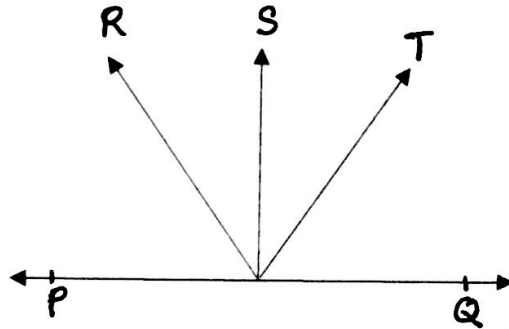
8. In given figure, $BE \perp AB$, find the value of x and y .



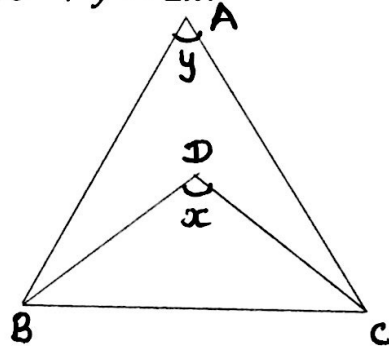
9. In the figure, if $l \parallel m$ and n is a transversal such that $\angle 8 : \angle 5 = 13 : 5$. Find all the angles.



10. In the figure, ray OS stands on a line POQ. Ray OR and ray OT are angle bisectors of $\angle POS$ and $\angle QOS$ respectively. If $\angle POS = x$, find $\angle ROT$.

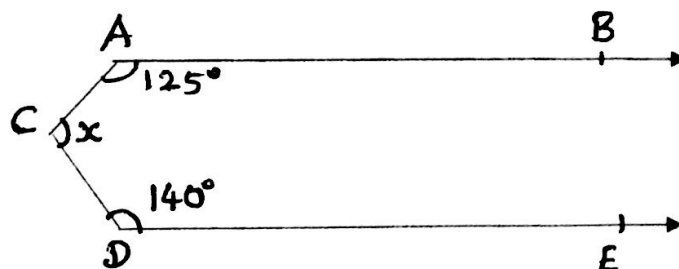


11. In $\triangle ABC$, BD and CD are internal bisectors of $\angle B$ and $\angle C$ respectively. Prove that $180^\circ + y = 2x$.

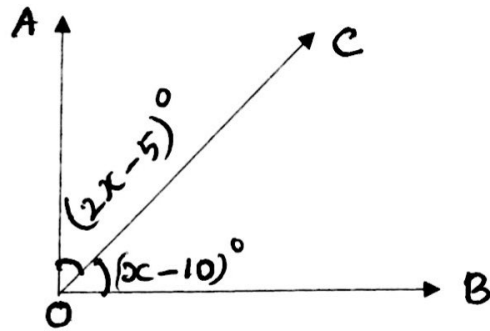


12. The angles of a triangle are $(x - 40)^\circ$, $(x - 20)^\circ$ and $(\frac{x}{2} - 10)^\circ$. Find the value of x and then the angles of the triangle.

13. In the adjoining figure, $AB \parallel DE$ find the value of x .



14. In the figure, $AO \perp OB$, find $\angle AOC$ and $\angle BOC$.



15. If two lines intersect each other, then prove that the vertically opposite angles are equal.

Prepared by

IX & X girls section.