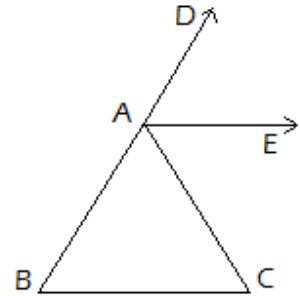


MATHEMATICS: ASSIGNMENT SHEET

CLASS-IX (FA#2)

- 1) In figure 1, AE is the angle bisector of exterior angle $\angle CAD$ and is parallel to side BC. Show that ΔABC is an isosceles triangle.

Figure 1



- 2) In figure 2, if $x=y$ and $AB = CB$, then prove that $AE = CD$.

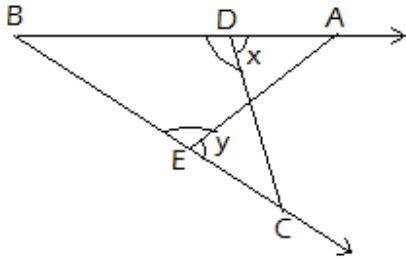


Figure 2

- 3) In figure 3, ΔPQR , $PR = QR$ and bisectors of $\angle P$ and $\angle Q$ meet QR at M and PR at N . prove that $PM = QN$

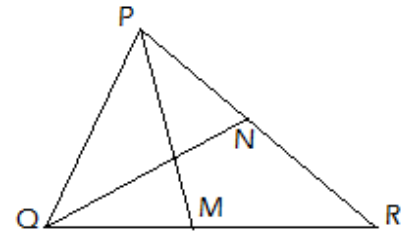


Figure 3

- 4) In figure 4, $AB = CF$, $EF = BD$ and $\angle AFE = \angle CBD$. Prove that $\Delta AFE \cong \Delta CBD$.

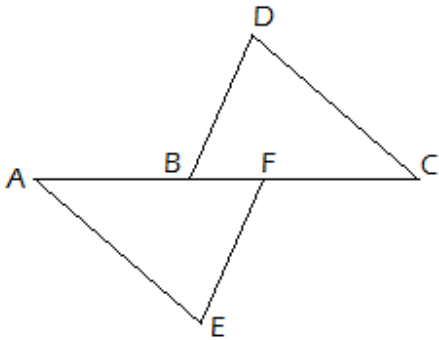


Figure 4

- 5) In figure 5, $AB = CD$, $OB = OC$ and $\angle ABD = \angle DCA$. Prove that $AC = BD$.

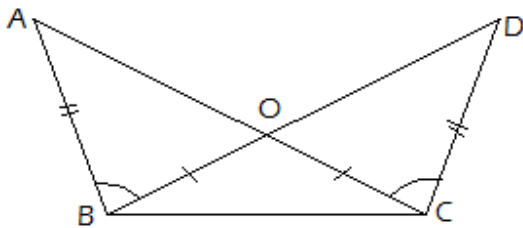


Figure 5

- 6) In figure 6, PQRS is a quadrilateral and A and B are respectively points on sides PS and RS such that $PQ = RQ$ and $\angle 3 = \angle 4$. Prove that $\triangle PQS \cong \triangle RQS$.

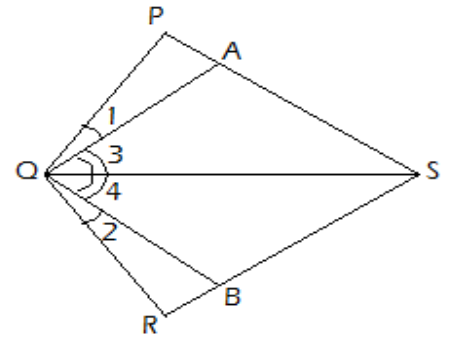


Figure 6

- 7) In figure 7, D is any point in the interior of $\triangle ABC$, prove that $AC + BC > AD + BD$.

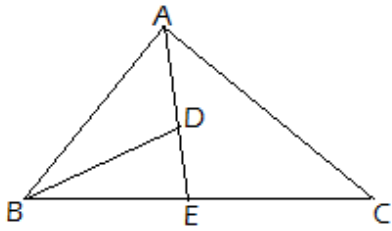


Figure 7

- 8) In figure 8, $PR > PQ$ and S is the point on PR such that $PQ = PS$. Prove That $QR > SR$.

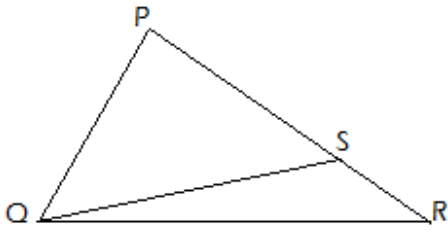


Figure 8