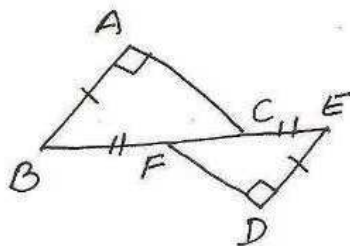


(4)



to show $\triangle ABC \cong \triangle DEF$

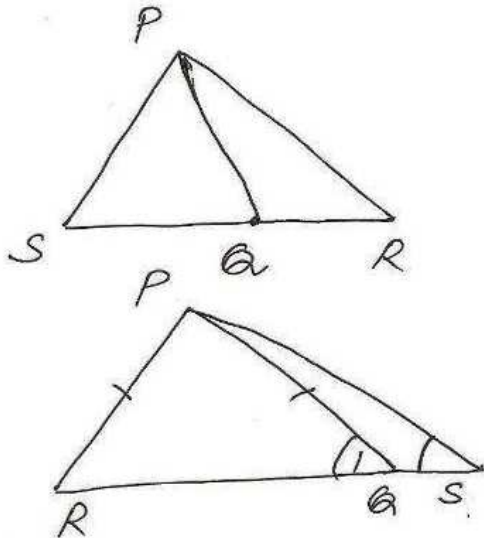
proof $\angle A = \angle D = 90^\circ$

$$BC = EF \begin{cases} BF = CE \\ BF + CF = CE + CF \\ \Rightarrow BC = EF \end{cases}$$

$AB = DE$ (given)

$\therefore \triangle ABC \cong \triangle DEF$ by
RHS prop

(5)



to show $PS > PQ$

proof In $\triangle PQR$

$$PR = PQ$$

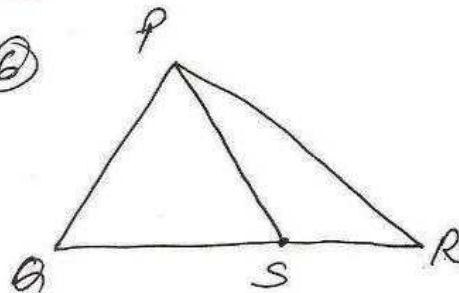
$$\Rightarrow \angle L = \angle R \text{ (isos } \triangle \text{ prop)}$$

But $\angle L > \angle S$

$\therefore \angle R > \angle S$

$\Rightarrow PS > PR$

(6)



to prove

$$PQ + QR + RP > 2PS$$

proof In $\triangle PQS$

$$PQ + QS > PS \quad \dots \text{--- (i)}$$

In $\triangle PSR$

$$RS + PR > PS \quad \dots \text{--- (ii)}$$

$$\text{(i) + (ii)}$$

$$PQ + QS + SR + PR > 2PS$$

$$\Rightarrow PQ + QR + PR > 2PS$$

[exterior angle of \triangle is greater than each of the remote interior angles]