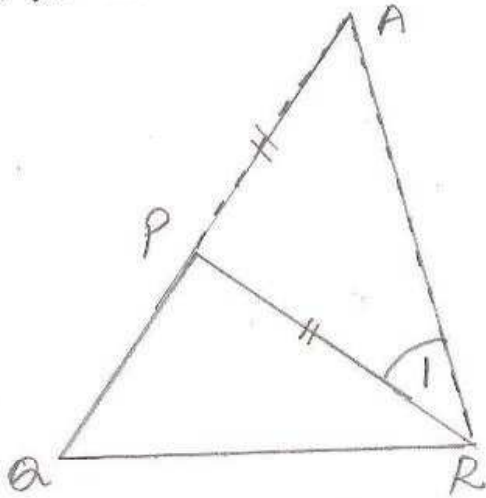


In a Δ sum of any two sides is greater than the third side



To Prove - In ΔPQR

$$PQ + PR > QR$$

$$PR + QR > PQ$$

$$QR + PQ > PR$$

const - produce QP to A , s.t. $PA = PR$,
join AR

Proof In ΔPAR , $PA = PR$ (construction)
 $\angle = \angle A$

(isosceles Δ property)
(\angle is a part of $\angle ARQ$)

but $\angle ARQ > \angle$

$$\therefore \angle ARQ > \angle A$$

In ΔAQR , $\angle ARQ > \angle A$

$$QA > QR$$

$$PQ + PA > QR$$

$$PQ + PR > QR$$

Similarly

$$PR + QR > PQ$$

$$QR + PQ > PR$$