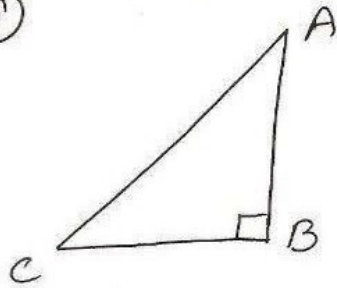


ex 7.4

NCERT Page 9

①



To Prove $AC > AB$
 $AC > BC$

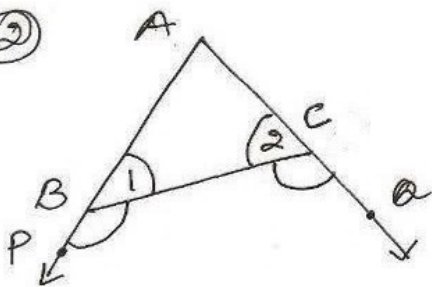
Proof $\angle B = 90^\circ$
 $\angle A + \angle C = 180 - \angle B$
 $= 180 - 90$
 $= 90^\circ$

$\therefore \angle A + \angle C = \angle B$

$\Rightarrow \angle B > \angle A \quad | \quad \angle B > \angle C$
 $\Rightarrow AC > BC \quad | \quad AC > AB$

[In a Δ greater angle has longer side opp. to it.]

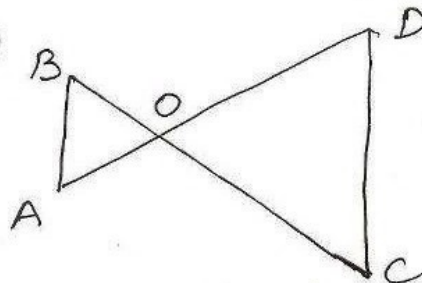
②



To Show $AC > AB$

Proof $\angle PBC < \angle ACQ$
 $\angle A + \angle 2 < \angle A + \angle 1$
 $\Rightarrow \angle 2 < \angle 1$
 $AB < AC$
 $\Rightarrow AC > AB$

③



given - In fig. $\angle B < \angle A$,
 $\angle C < \angle D$

to show $AD < BC$

proof In ΔAOB
 $\angle B < \angle A$
 $AO < OB \dots \textcircled{1}$

In ΔCOD
 $\angle C < \angle D$
 $OD < OC \dots \textcircled{2}$

$\textcircled{1} + \textcircled{2}$

$OA + OD < OB + OC$

$\Rightarrow AD < BC$