

7.4

1.] Proof.

$$\angle B = 90^\circ$$

$\angle C$ is acute angle

$$\Rightarrow \angle B > \angle C$$

$$\Rightarrow AC > AB \quad \text{--- (i)}$$

So, $\angle A$ is acute

$$\Rightarrow \angle B > \angle A$$

$$\Rightarrow AC > BC \quad \text{--- (ii)}$$

from equation (i) & (ii) we get
AC is the longest side.

AC is the longest side.

2.] $\angle ABC + \angle PBC = 180^\circ$ [linear pair]

$$\Rightarrow \angle ABC = 180^\circ - \angle PBC$$

Similarly, $\angle ACB = 180^\circ - \angle PCB$

It is given that $\angle PBC < \angle PCB$

$$180^\circ - \angle PCB < 180^\circ - \angle PBC$$

similarly

$$\Rightarrow AB < AC$$

$$\Rightarrow AC > AB$$