5.) $PR > PQ$

$\angle PQR > \angle PRQ$ (i)

[Angle opposite to longer side is greater]

$\angle QPS > \angle RPS$ [PS bisects $\angle QPR$] (ii)

In $\triangle PQR$, $\angle PQS + \angle QPS + \angle PSQ = 180$

$\Rightarrow \angle PSQ = 180 - \angle PQS + \angle QRS$ (iii)

Similarly in $\triangle PSR = 180 - \angle PRS + \angle RP$

$\Rightarrow \angle PRS = 180 - \angle PRS + \angle QRS$ from (i) and

From (i) we known that $\angle PQS \angle PSR$

So from (iii) and (iv) $\angle PQ \angle PSQ \angle PSR$

$\Rightarrow \angle \Rightarrow \angle PSR > \angle PSQ$

6.) We have a line $\overleftrightarrow{l}$ and O is a point not on $\overleftrightarrow{l}$

$OP \perp \overleftrightarrow{l}$

We have to prove that $OP < OQ$, $OP < OR$ and $OP < OS$.

In $\triangle OPQ$, $\angle P = 90^\circ$

$\therefore \angle Q$ is an acute angle

$\angle Q < 90^\circ$

$\therefore \angle Q < \angle P$

Hence, $OP < OQ$

Similarly, we can prove that OP is shorter than OR, OS etc.