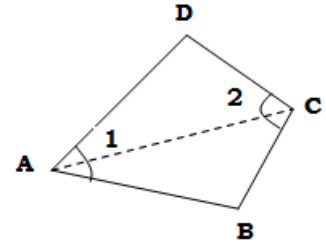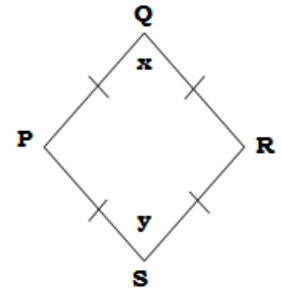## **Triangle and its Properties: Worksheet -8**

1. In the adjoining Quadrilateral ABCD, AD is the greatest side and BC is the smallest side. Show that $\angle 1 < \angle 2$.   (Hint : Join AC)

2. In the adjoining Quadrilateral PQRS, PQ = QR, PS = RS and Ps > PQ.   Show that $\angle x > \angle y$. (Join QS)

3. In a Quadrilateral ABCD, AC and BD are diagonals.

Prove the following :

    (i) AB + BC + CD + DA > 2AC

    (ii) AB + BC + CD + DA > 2BD

    (iii) AB + BC + CD + DA > AC + BD