

Practical Geometry

CHAPTER

4

To construct a quadrilateral when three sides and two included angles are given (SASAS) case:

Example:

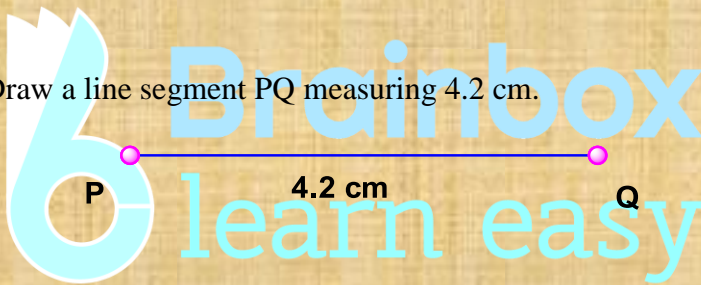
Construct a quadrilateral PQRS, in which $PQ = 4.2$ cm, $\angle Q = 80^\circ$, $QR = 3.5$ cm, $PS = 5.8$ cm and $\angle P = 110^\circ$.

Sol.

Draw a rough figure and label it with the given measurement as shown. Follow the given steps to construct the quadrilateral.

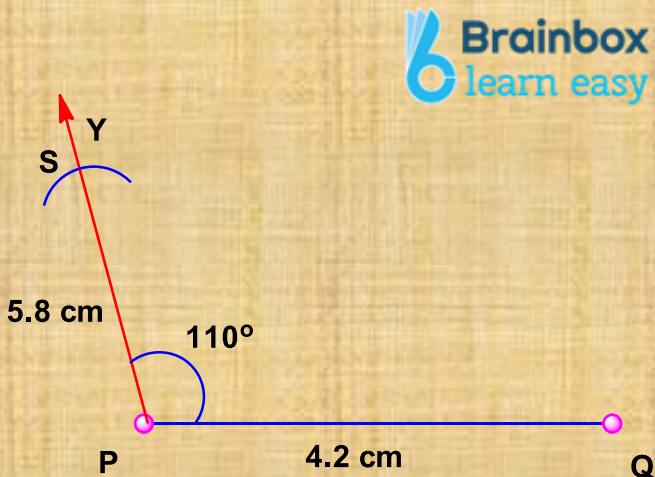
Step I:

Draw a line segment PQ measuring 4.2 cm.



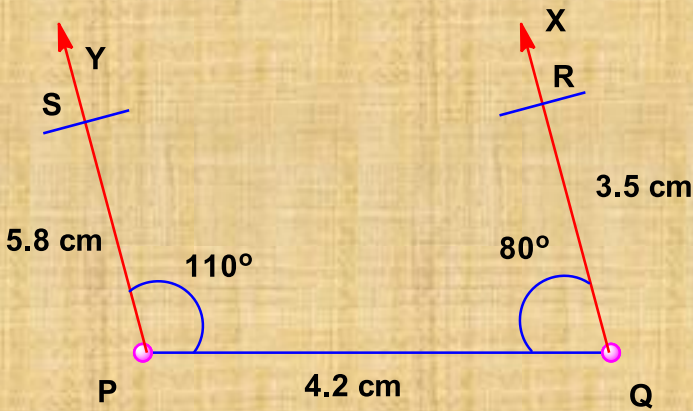
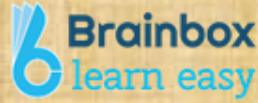
Step II:

At P, draw a ray \overrightarrow{PY} such that $\angle P = 110^\circ$ and mark $PS = 5.8$ cm on \overrightarrow{PY} .



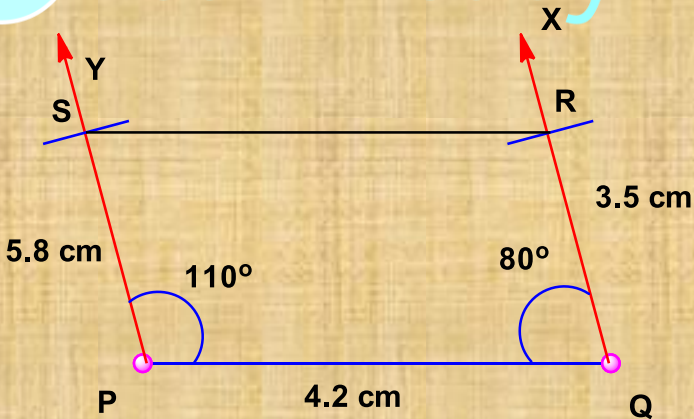
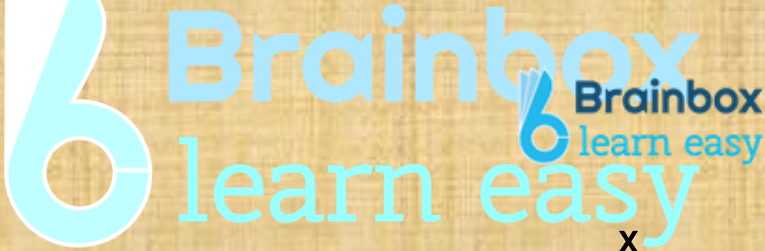
Step 3:

At Q, draw a ray \overrightarrow{QX} such that $\angle Q = 80^\circ$ and mark $QR = 3.5$ cm on \overrightarrow{QX} .



Step 4:

Join SR.



Thus "PQRS" formed is the required quadrilateral.