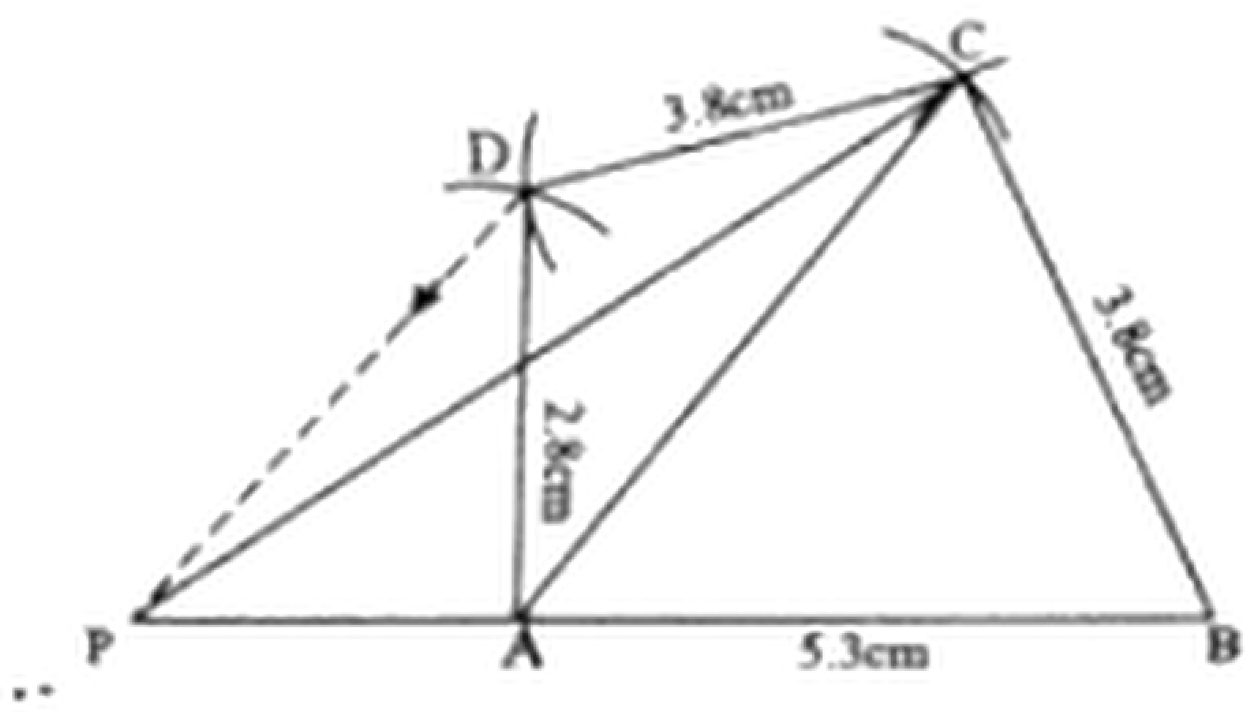
# EXERCISE 17.3

**Q1. Construct a quadrilateral ABCD, having**

**m$\overline{AB}$ = m$\overline{AC}$ = 5.3 cm, m$\overline{BC}$ = m$\overline{CD}$ = 3.8 cm and m$\overline{AD}$ = 2.8 cm.**

**Solution:**




**Construction:**

**(i)** With center at A and B radius 5.3 cm draw an arc.

**(ii)** Take m$\overline{AB}$=5.3 cm.

**(iii)** With center at B and radius 3.8 cm draw another arc to cut the first arc at D.

**(iv)**Join $\overline{BC}$ and $\overline{AC}$.

**(v)**With center at C and radius 3.8 cm draw an arc.

**(vi)**With center at A and radius 2.8 c draw another arc to cut the first arc at D.

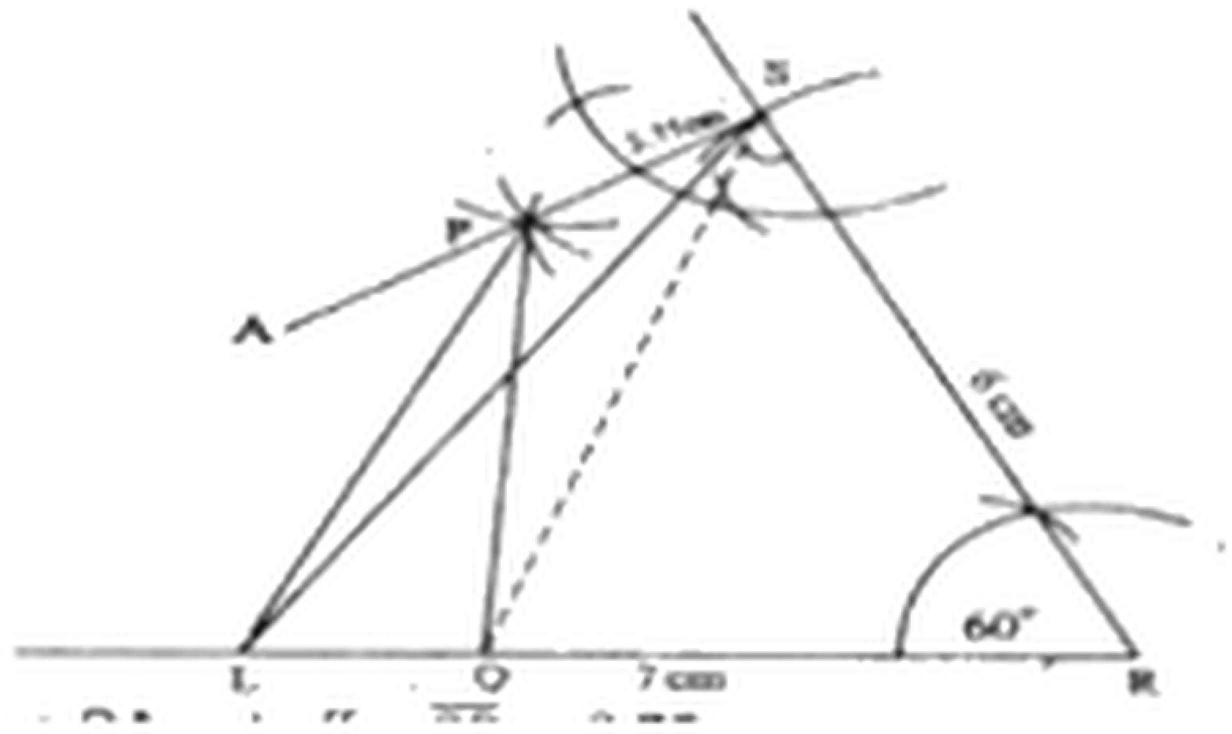
**(vii)** Join $\overline{AD}$ and $\overline{DC}$ to complete the quadrilateral ABCD.

**(viii)** Through D draw ∥ $\overline{CA}$ meeting BA produced at P.

**(ix)**Join $\overline{PC}$.

**(x)** The ΔPBC is the required triangle.

**Solution:**



**Construction:**

**(i)** Take m$\overline{QR}$ = 7 cm.

**(ii)** At the point R make m∠QRS = 60°

**(iii)** With center at R cut off $\overline{RS}$ = 6 cm

**(vi)** Join $\overline{PQ}$ to complete the quadrilateral PQRS.

**(vii)** Join $\overline{QS}$

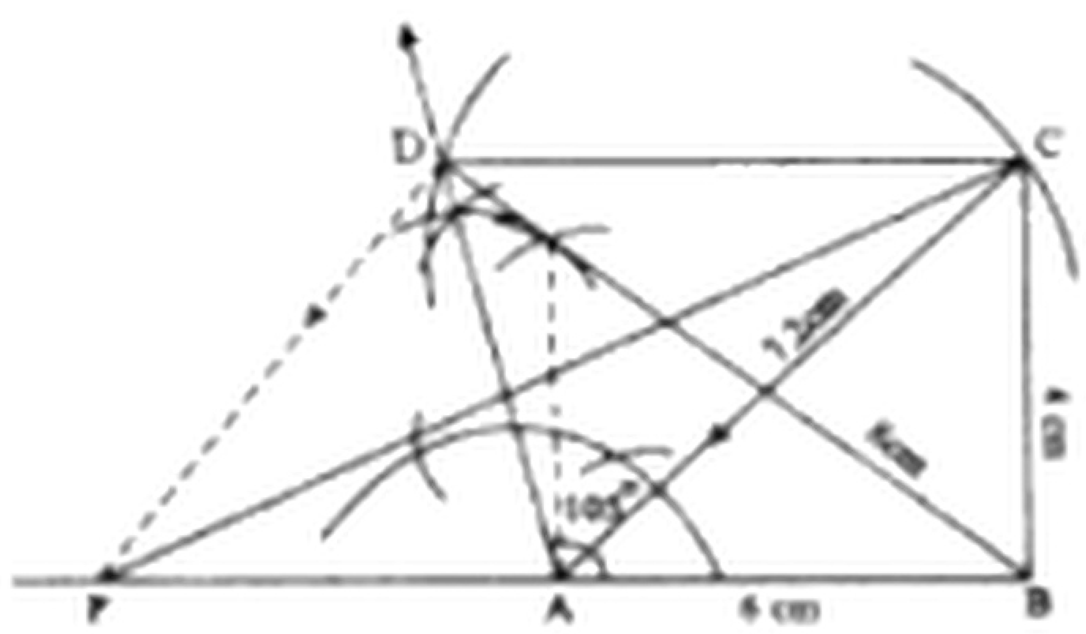
**(viii)** Through P draw PL ∥ QS to meet RQ produced at L.

**(ix)** Join $\overline{SL}$

**(x)** Then LRS is the required triangle

**Q3. Construct a △ equal in area to the quadrilateral ABCD, having m$\overline{AB}$ = 6cm, m$\overline{BC}$ = 4cm, m$\overline{AC}$ = 7.2 cm, m∠BAD = 105° and m$\overline{BD}$ = 8cm.**

**Solution**



**Construction**

**(iii)**With B as center and radius 4 cm draw another arc to cut AL at the point D.

**(iv)**Join AC and BC.

**(v)** At the end point A make m∠BAL = 105°.

**(vi)** With B as center and radius 8 cm draw arc to cut AL at the point D.

**(Vii)** Join DC to complete the quadrilateral ABCD.

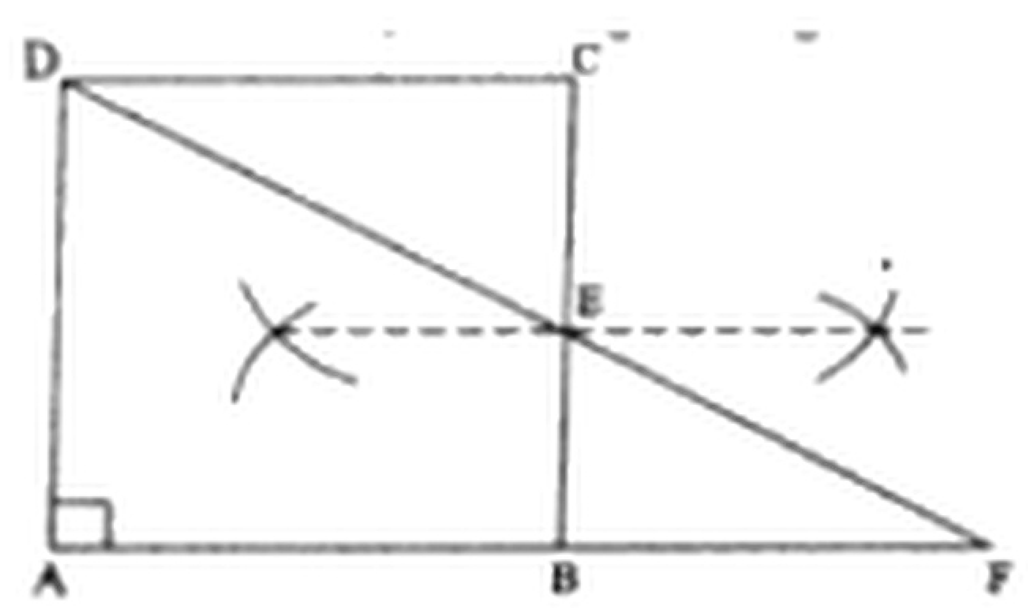
**(viii)** Draw $\overline{DP}$ II $\overline{CA}$ to meet BA produced at P.

**(ix)** Join P to C.

**(x)** Then PBC is the required triangle.

**Q4. Construct a right-angled triangle equal in area to a given square.**

**Solution:**




**Construction:**

**(i)**Draw perpendicular bisector of $\overline{BC}$.

**(ii)**Mark point E the midpoint of $\overline{BC}$.

**(iii)**Draw the straight-line DEF to meet AB produced the point F.

**(iv)**Then DAF is the required right-angled triangle

**Note:**

Right angled triangles DCE and FBE are congruent because m$\overline{CE}$ = m$\overline{BE}$ and m∠CED = m∠BEF.