

Geometrical Construction Steps for Exercise 3.3

Question (a): Construct the quadrilateral GOLD

Given: $OL = 7.5$ cm, $GL = 6$ cm, $LD = 5$ cm, $DG = 5.5$ cm, $OD = 10$ cm

1. Draw a line segment $OL = 7.5$ cm.
2. With center O and radius 10 cm, draw an arc. With center L and radius 5 cm, draw another arc cutting the first arc at D.
3. Join OD and LD.
4. With center L and radius 6 cm, draw an arc. With center D and radius 5.5 cm, draw another arc cutting the previous one at G.
5. Join LG, DG, and OG.
6. The required quadrilateral GOLD is formed.

Question (b): Construct the quadrilateral PQRS

Given: $PQ = 4.2$ cm, $QR = 3$ cm, $PS = 2.8$ cm, $PR = 4.5$ cm, $QS = 5$ cm

1. Draw a line segment $PQ = 4.2$ cm.
2. With center P and radius 4.5 cm, draw an arc. With center Q and radius 3 cm, draw another arc cutting the first arc at R.
3. Join PR and QR.
4. With center P and radius 2.8 cm, draw an arc. With center Q and radius 5 cm, draw another arc cutting the first arc at S.
5. Join PS, QS, and SR.
6. The required quadrilateral PQRS is formed.