Constructions Ex 17.1 Q3

Answer :

Steps of construction:
1. Mark three non collinear points A, B and C such that none of them lie on the same line.
2. Join AB, BC and CA to form triangle ABC.

Parallel line to AC

1. With A as centre, draw an arc cutting AC and AB at T and U, respectively.
2. With centre B and the same radius as in the previous step, draw an arc on the opposite side of AB to cut AB at X.
3. With centre X and radius equal to TU, draw an arc cutting the arc drawn in the previous step at Y.
4. Join BY and produce in both directions to obtain the line parallel to AC.

Parallel line to AB

1. With B as centre, draw an arc cutting BC and BA at W and V, respectively.
2. With centre C and the same radius as in the previous step, draw an arc on the opposite side of BC to cut BC at P.
3. With centre P and radius equal to WV, draw an arc cutting the arc drawn in the previous step at Q.
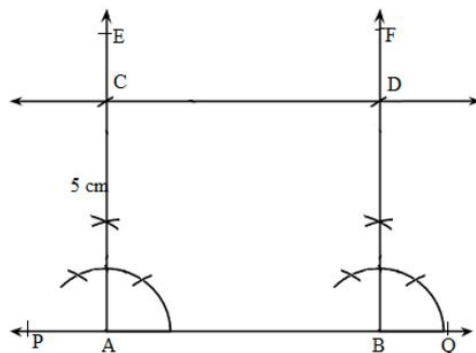4. Join CQ and produce in both directions to obtain the line parallel to AB.

Parallel line to BC

Constructions Ex 17.1 Q4

Answer :

Steps of construction:

1. Draw a line PQ.
2. Take any two points A and B on the line.
3. Construct $\angle PBF = 90°$ and $\angle QAE = 90°$.
4. With A as centre and radius 5 cm cut AE at C.
5. With B as centre and radius 5 cm cut BF at D.
6. Join CD and produce it on either side to get the required line parallel to AB and at a distance of 5 cm from it.

********** END *********