Exercise 17B

Q1

Answer :

Steps of construction:

Step 1: Draw *AB* = $5.2cm$

Step 2: With *B* as the centre, draw an arc of $4.7\ cm$.

Step 3: With *A* as the centre, draw another arc of $7.6\ cm$, cutting the previous arc at C.

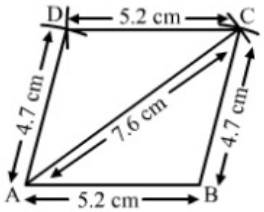
Step 4: Join *A* and *C*.

Step 5: We know that the opposite sides of a parallelogram are equal. Thus, with *C* as the centre, draw an arc of $5.2cm$.

Step 6: With *A* as the centre, draw another arc of $4.7\ cm$, cutting the previous arc at *D*.

Step 7: Join *CD* and *AD*.

Then, *ABCD* is the required parallelogram.



Q2

Answer :

Steps of construction:

Step 1: Draw AB= $4.3cm$

Step 2: With *B* as the centre, draw an arc of $6.8\ cm$.

Step 3: With *A* as the centre, draw another arc of $4cm$, cutting the previous arc at *D*.

Step 4: Join *BD* and *AD*.

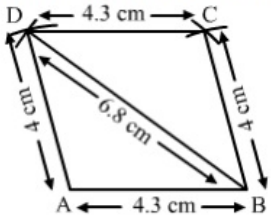
Step 5: We know that the opposite sides of a parallelogram are equal.

Thus, with *D* as the centre, draw an arc of $4.3cm$.

Step 6: With *B* as the centre, draw another arc of $4\ cm$, cutting the previous arc at *C*.

Step 7: Join *CD* and *BC*.

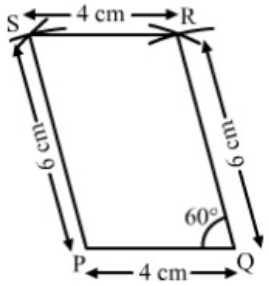
then, *ABCD* is the required parallelogram.



Q3

Answer :

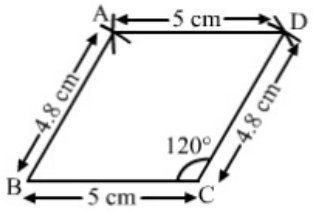
Steps of construction:
Step 1: Draw *PQ*= 4 cm
Step 2: Make $\angle PQR = 60^{o}$
Step 2: With *Q* as the centre, draw an arc of 6 cm and name that point as *R*.
Step 3: With *R* as the centre, draw an arc of 4 cm and name that point as *S*.
Step 4: Join *SR* and *PS*.
Then, *PQRS* is the required parallelogram.



Q4

Answer :

Steps of construction:
Step 1: Draw BC= $5cm$
Step 2: Make an $\angle BCD = 120^{o}$
Step 2: With *C* as centre draw an arc of $4.8\ \mathbf{cm}$, name that point as *D*
Step 3: With D as centre draw an arc $5\,\mathbf{cm}$, name that point as *A*
Step 4: With *B* as centre draw another arc $4.8\ \mathbf{cm}$ cutting the previous arc at *A*.
Step 5: Join *AD* and *AB*
then, *ABCD* is a required parallelogram.

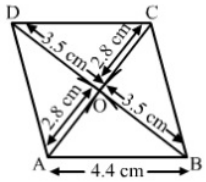


Q5

Answer :

We know that the diagonals of a parallelogram bisect each other.
Steps of construction:
Step 1: Draw *AB*= $4.4cm$

Step 2: With *A* as the centre and radius $2.8cm$, draw an arc.
Step 3: With *B* as the centre and radius $3.5cm$, draw another arc, cutting the previous arc at point *O*.
Step 4: Join *OA* and *OB*.
Step 5: Produce *OA* to *C*, such that *OC*= *AO*. Produce *OB* to *D*, such that *OB*=*OD*.
Step 5: Join *AD*, *BC*, and *CD*.
Thus, *ABCD* is the required parallelogram. The other side is 4.5 cm in length.



Q6

Answer :

Steps of construction:
Step 1: Draw *AB*= 6.5cm
Step 2: Draw a perpendicular at point *A*. *N*ame that ray as *AX*. From point *A*, draw an arc of length 2.5 cm on the ray *AX* and name that point as L.
Step 3: On point *L*, make a perpendicular. Draw a straight line YZ passing through L, which is perpendicular to the ray AX.
Step 4: Cut an arc of length 3.4 cm on the line *YZ* and name it as *C*.
Step 5: From point *C*, cut an arc of length 6.5 cm on the line *YZ*. *N*ame that point as *D*.
Step 6: Join *BC* and *AD*.

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