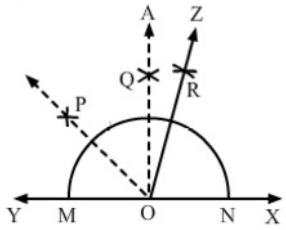
Exercise 14B

(vii)

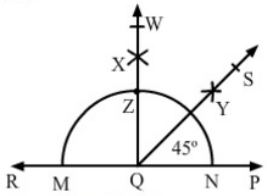


Steps for construction:

1. Draw a line XY and take a point O.
2. With O as the centre and any convinient radius, draw an arc cutting XY at M and N.
3. With N as the centre and the same radius, draw an arc.
4. With M as the centre and the same radius as before, draw another arc cutting the previously drawn arc at Q.
5. Draw QO.
6. Draw PO bisector of $\angle YOA$.
7. Draw ZO bisector of $\angle POX$.

$\therefore \angle XAZ = 67.5^\circ$

(viii)



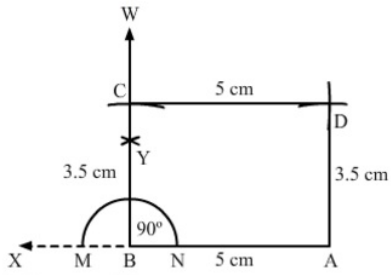
Steps for construction:

1. Draw a line PR.
2. Take a point Q on PR. With Q as the centre and any convenient radius, draw an arc cutting AC at M and N.
3. With N as the centre and radius more than half of MN, draw an arc.
4. With M as the centre and the same radius as before, draw another arc to cut the previous arc at X.
5. Draw QX, meeting the arc at Z. Produce it to W.
6. With Z as the centre and radius more than half of ZN, draw an arc.
7. With N as the centre and the same radius as in step (6), draw another arc cutting the previously drawn arc at a point Y.
8. Draw QY and produce it to point S.

Q5

Answer :

Construction steps:



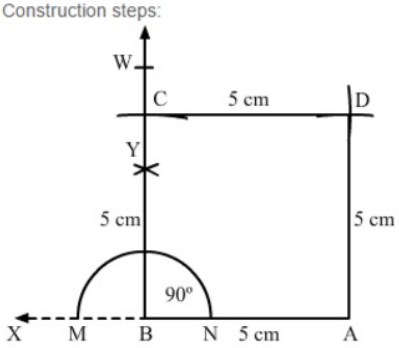
1. Draw a ray AX.
2. With A as the centre, cut the ray AX at B such that AB is equal to 5 cm.
3. With B as the centre and any convenient radius, draw an arc cutting AX at M and N.
4. With N as the centre and radius more than half of MN, draw an arc.
5. With M as the centre and the same radius as before, draw another arc to cut the previous arc at Y.
6. Draw BY and produce it to W.
7. With B as the centre and a radius of 3.5 cm, cut ray BW at point C.
8. With C as the centre and a radius of 5 cm, draw an arc on the right side of BC.
9. With A as the centre and a radius of 3.5 cm, draw an arc cutting the previous arc at D.
10. Join CD and AD.

ABCD is the required rectangle.

Q6

Answer :

Construction steps:



1. Draw a ray AX.
2. With A as centre cut the ray AX at B such that AB=5 cm
3. With B as centre and any convenient radius,draw an arc cutting AX at M and N.
4. With N as centre and radius more than half of MN draw an arc.
5. With M as centre and the same radius as before,draw another arc to cut the previous arc at Y.
6. Join BY and produced it to W.
7. With B as centre and radius 5 cm cut ray BW at point C.
8. With C as centre and radius 5 cm draw an arc on right side of BC.
9. With A as centre and radius 5 cm draw an arc cutting the previous arc at D.
10. Join CD and AD.

ABCD is required square.

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