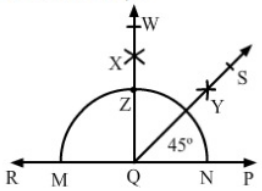
Exercise 14B

Q3

Answer :

Construction steps:



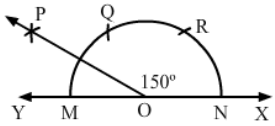
1. Draw a line PR.
2. Take a point Q on PR. With Q as the centre and any convenient radius, draw an arc cutting AC at M and N.
3. With N as the centre and radius more than half of MN, draw an arc.
4. With M as the centre and the same radius as before, draw another arc to cut the previous arc at X.
5. 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.

$\angle POS$ is the required angle of 45°.

Q4

Answer :

(i)

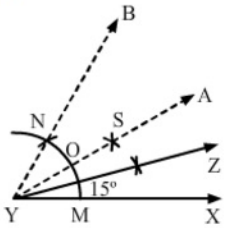


Steps for construction:

1. Draw a line XY and take a point O.
2. With O as the centre and any suitable radius, draw an arc cutting XY at M and N.
3. With N as the centre and the same radius,draw an arc cutting MN at R.
4. With R as the centre and the same radius as before, draw another arc cutting MN at Q .
5. With Q as the centre and radius less than MQ draw an arc.
6. With M as the centre and the same radius draw another arc cutting the previously drawn arc at P
5. Join PO.

$\therefore \angle XOP = 150^\circ$

(ii)



Steps for construction:

1. Draw a ray XY.
2. With X as the centre and any convenient radius, draw an arc cutting XY at M.
3. With M as the centre and the same radius, draw an arc cutting the previously drawn arc at N.
4. Draw YN and produce it to B.
4. Draw the bisector AY of $\angle XYB$.
5. Again, draw the bisector YZ of $\angle XYA$.

$\therefore \angle XYZ = 15^\circ$

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