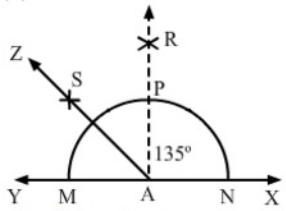
Exercise 14B

(iii)

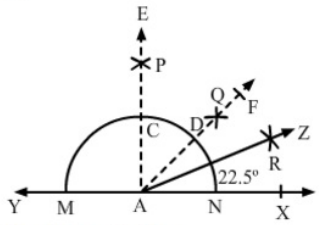


Steps for construction:

1. Draw a line XY and take a point A.
2. With A as the centre and any convenient 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 R.
5. Draw RA.
6. Draw draw the bisector ZA of ∠YAR.

$\therefore \angle XAZ = 135^\circ$

(iv)

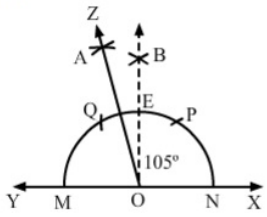


Steps for construction:

1. Draw a line XY.
2. Take a point A on XY. With A as the centre and any convenient radius, draw an arc cutting XY 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 P.
5. Draw PA meeting the arc at C. Produce it to E.
6. With C as the centre and radius more than half of CN, 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 Q.
8. Draw AQ and produce it to point F.
9. Draw the bisector ZA of ∠XAF.

$\therefore \angle XAZ = 22.5^\circ$

(v)

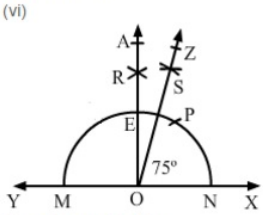


Steps for construction:

1. Draw a line XY.
2. Take a point O on XY. With O as the centre and any convenient radius, draw an arc cutting XY at M and N. Draw arcs with the same radius cutting MN at P and Q.
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 B.
5. Draw BO meeting the arc at E.
6. With Q as the centre and radius more than half of PE, draw an arc.
7. With E as the centre and the same radius as in step (6), draw another arc cutting the previously drawn arc at a point A.
8. Draw AO and produce it to point Z.

$\therefore \angle XOZ = 105^\circ$

(vi)



Steps for construction:

1. Draw a line XY.
2. Take a point O on XY. With O as the centre and any convenient radius, draw an arc cutting XY at M and N. Draw arcs with the same radius cutting MN at P.
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 R.
5. Draw RO meeting the arc at E. Produce it to A.
6. With P as the centre and radius more than half of PE, draw an arc.
7. With E as the centre and the same radius as in step (6), draw another arc cutting the previously drawn arc at a point S.
8. Draw OS and produce it to point Z.

$\therefore \angle XOZ = 75^\circ$

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