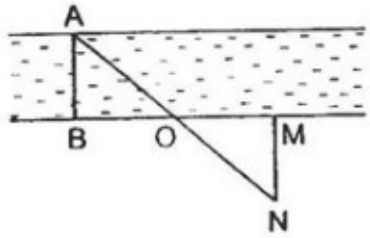
Exercise 5A

Question 33:
Let AB be the breadth of a river. Now take a point M on that bank of the river where point B is situated. Through M draw a perpendicular and take point N on it such that point, A, O and N lie on a straight line where point O is the mid point of BM.



Now in ΔABO and ΔNMO we have,

$\angle OBA = \angle OMN = 90^{\circ}$

$OB = OM$ [$\because$ O is mid point of BM]

and $\angle BOA = \angle MON$ [Vertically opposite angles]

Thus, by Angle - Side - Angle criterion of congruence, we have,

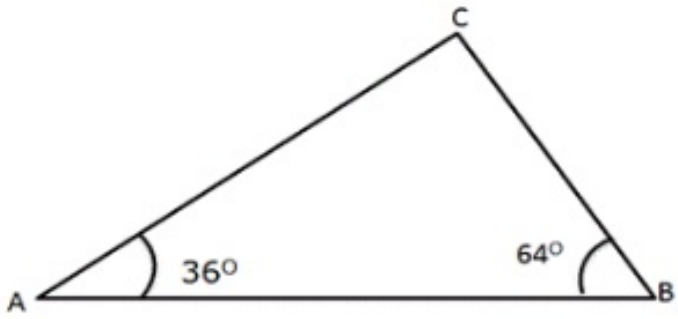
$\Delta ABO \cong \Delta NMO$ [By ASA]

The corresponding parts of the congruent triangles are equal.

$\therefore$ $AB = NM$ [C.P.C.T]

Thus, we find that MN is the width of the river.

Question 34



We have $\angle A = 36°$ and $\angle B = 64°$

By the angle sum property in ΔABC, we have

$\angle A+\angle B+\angle C = 180^\circ$

$\Rightarrow\ 36^\circ + 64^\circ + \angle C = 180^\circ$

$\Rightarrow \angle C = 180^\circ - 100^\circ = 80^\circ$

Therefore, we have

$\angle A = 36°, \angle B = 64°$ and $\angle C = 80°$

$\therefore \angle C$ is largest and $\angle A$ is shortest.

Side opposite to $\angle C$ is longest and hence AB is longest side.

Side opposite to $\angle A$ is shortest and hence BC is shortest side.

Question 35:

In a right angle triangle, greatest angle is $\angle A = 90^\circ$.

And hence other angles are less than 90° because sum of the angles of a triangle is 180°.

So, $\angle A$ is the greatest angle.

Therefore, side BC which is opposite to $\angle A$ is longest.

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