4/9/2020 FRIDAY

MATHEMATICS

STD-X
class-24

Assignment

Textbook page no·53
Questions 1, 2, 3 Answers

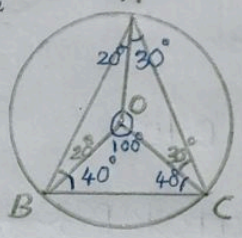
1·Ans) i) Since ΔAOB is isosceles,

$\angle OAB = \underline{20^\circ}$

$\angle OAC = \underline{30^\circ}$

$\angle A = 20^\circ + 30^\circ = 50^\circ$

$\angle BOC = 2 \times 50^\circ = \underline{100^\circ}$



ΔOBC is isosceles.

$\angle OBC + \angle OCB = 180 - 100$

$= \underline{80^\circ}$

$\angle OBC = \underline{40^\circ}$, $\angle OCB = \underline{40^\circ}$

$\angle B = 20 + 40 = \underline{60^\circ}$

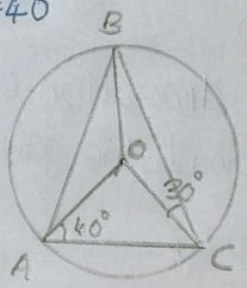
$\angle C = 30 + 40 = \underline{70^\circ}$

ii) Since ΔOAC is isosceles, $\angle OCA = 40^\circ$

$\angle AOC = 180 - (40 + 40)$

$= 180 - 80 = 100^\circ$

$\angle B = \frac{1}{2} \times 100 = 50^\circ$



Since ΔOBC is isosceles, $\angle OAB = 20^\circ$

$\angle A = 40 + 20 = 60^\circ$

$\angle C = 40 + 30 = 70^\circ$

iii) $\angle ABC = \frac{1}{2} \times 40^\circ = 20^\circ$

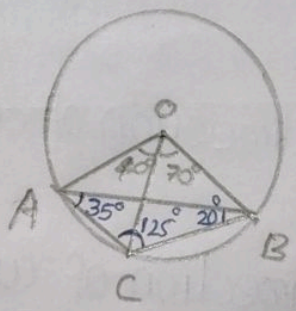
$\angle BAC = \frac{1}{2} \times 70^\circ = 35^\circ$

$\angle AOB = 40^\circ + 70^\circ = 110^\circ$

$\angle ACB = 180 - \frac{110}{2}$

$= 180 - 55$

$= \underline{125^\circ}$



Since ΔOBC is isosceles

$\angle OBC = \frac{1}{2}(180 - 70) = \underline{55^\circ}$

$\angle OCB = \underline{55^\circ}$