



Lines and Angles Ex 8.2 Q13

On adding (i) and (ii), we get:

$$2a = 180 + 30$$

$$2a = 210$$

$$a = \frac{210}{2}$$

$$a = \boxed{105}$$

On putting,  $a = 105$  in (i):

$$105 - b = 30$$

$$-b = 30 - 105$$

$$-b = -75$$

$$b = \boxed{75}$$

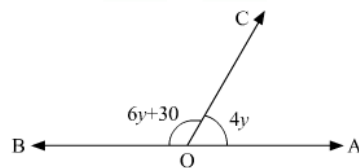
Hence, the values are  $a = 105^\circ$  and  $b = 75^\circ$ .

Lines and Angles Ex 8.2 Q14

Answer :

Let us assume,  $AOB$  as a straight line.

This makes  $\angle AOC$  and  $\angle BOC$  to form a linear pair. Therefore, their sum must be equal to  $180^\circ$ .



We can say that:

$$\angle AOC + \angle BOC = 180^\circ$$

Also,  $\angle AOC = 4y$  and  $\angle BOC = 6y + 30$ . This further simplifies to:

$$4y + (6y + 30) = 180$$

$$10y + 30 = 180$$

$$10y = 180 - 30$$

$$10y = 150$$

$$y = \frac{150}{10}$$

$$y = \boxed{15}$$

Hence, the value of  $y = \boxed{15^\circ}$  makes  $AOB$  as a line.

\*\*\*\*\* END \*\*\*\*\*