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):

$$105 - b = 30$$

$$-b = 30 - 105$$

$$-b = -75$$

$$b = \boxed{75}$$

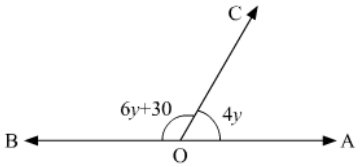
Hence, the values are $\boxed{a = 105^0}$ and $\boxed{b = 75^0}$.

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 180^0.



We can say that:

$\angle AOC + \angle BOC = 180^0$

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 $y = \boxed{15^0}$ makes AOB as a line.

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