

# Mathematics

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(Chapter – 6) (Lines and Angles)(Exemplar Problems)

(Class – IX)

## Exercise 6.1

Write the correct answer in each of the following:

### Question 6:

In Fig. 6.2, POQ is a line. The value of  $x$  is

(A)  $20^\circ$

(B)  $25^\circ$

(C)  $30^\circ$

(D)  $35^\circ$

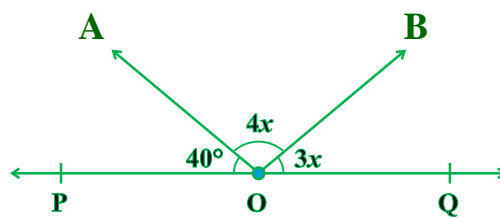


Fig. 6.2

### Answer 6:

(A)  $20^\circ$

### Solution:

Since, POQ is a line segment.

$$\therefore \angle POQ = 180^\circ$$

$$\Rightarrow \angle POA + \angle AOB + \angle BOQ = 180^\circ$$

$$\Rightarrow 40^\circ + 4x + 3x = 180^\circ$$

$$[\text{Putting } \angle POA = 40^\circ, \angle AOB = 4x \text{ and } \angle BOQ = 3x]$$

$$\Rightarrow 7x = 180^\circ - 40^\circ$$

$$\Rightarrow 7x = 140^\circ$$

$$\Rightarrow x = \frac{140^\circ}{7}$$

$$\therefore x = 20^\circ$$

Hence, option (A) is correct.

