

Mathematics

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

(Class – IX)

Exercise 6.3

Question 2:

In Fig. 6.10, $\angle 1 = 60^\circ$ and $\angle 6 = 120^\circ$. Show that the lines m and n are parallel.

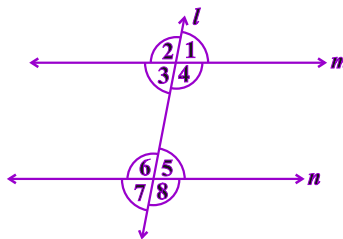


Fig. 6.10

Answer 2:

Given:

In figure, $\angle 1 = 60^\circ$ and $\angle 6 = 120^\circ$

To prove:

$m \parallel n$.

Proof:

Since, $\angle 1 = 60^\circ$ and $\angle 6 = 120^\circ$

Here, $\angle 1 = \angle 3$ [vertically opposite angles]

$\therefore \angle 3 = \angle 1 = 60^\circ$

Now, $\angle 3 + \angle 6 = 60^\circ + 120^\circ$

$\Rightarrow \angle 3 + \angle 6 = 180^\circ$

The sum of two interior angles on same side of l is 180° , hence the lines are parallel.

Hence, $m \parallel n$

