

Worksheet -9

Subject: - Mathematics

Class: - VII

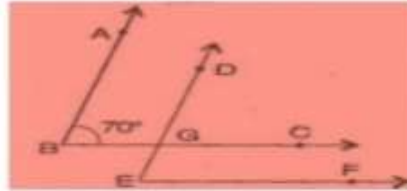
Teacher: - Ms. Neeru

Name: _____ Class & Sec: _____ Roll No. _____ Date: 17.08.2020

Exercise 5.2

Question 5

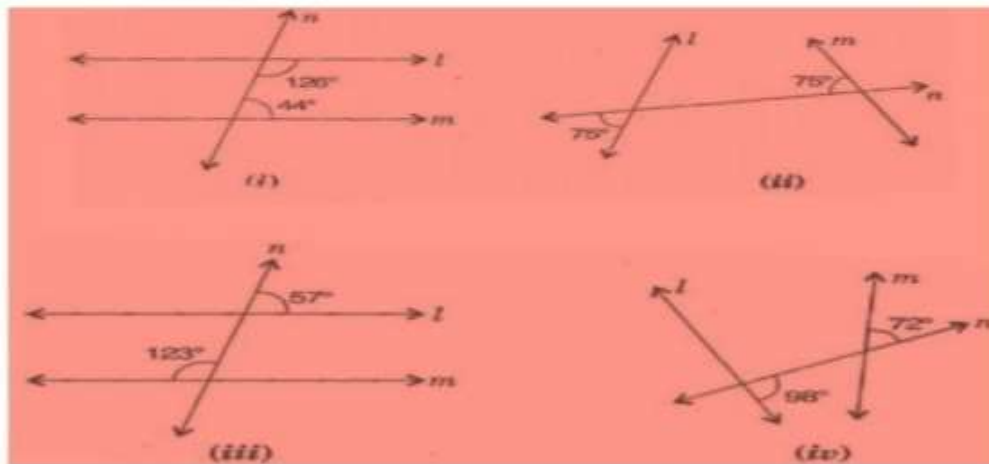
In the given figure, the arms of two angles are parallel. If $\angle ABC = 70^\circ$, then find:

(i) $\angle DGC$ (ii) $\angle DEF$ **Answer 5:**

- (i) Given, $AB \parallel DE$ and BC is a transversal line and $\angle ABC = 70^\circ$
 $\therefore \angle ABC = \angle DGC$ [Corresponding angles]
 $\therefore \angle DGC = 70^\circ$ (i)
- (ii) Given, $BC \parallel EF$ and DE is a transversal line and $\angle DGC = 70^\circ$
 $\therefore \angle DGC = \angle DEF$ [Corresponding angles]
 $\therefore \angle DEF = 70^\circ$ [From equation (i)]

Question 6

In the given figures below, decide whether l is parallel to m .

**Answer 6:**

- (i) $126^\circ + 44^\circ = 170^\circ$
 $l \not\parallel m$ because sum of interior opposite angles should be 180°
- (ii) $75^\circ + 75^\circ = 150^\circ$
 $l \not\parallel m$ because sum of angles does not obey the property of parallel lines.
- (iii) $57^\circ + 123^\circ = 180^\circ$
 $l \parallel m$ due to supplementary angles property of parallel lines.
- (iv) $98^\circ + 72^\circ = 170^\circ$
 l is not parallel to m because sum of angles does not obey the property of parallel lines.

