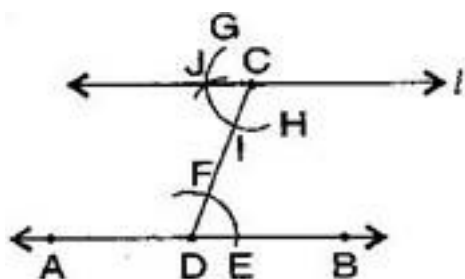


**CBSE Class –VII Mathematics**  
**NCERT Solutions**  
**Chapter 10 Practical Geometry (Ex. 10.1)**

**Question 1.** Draw a line, say AB, take a point C outside it. Through C, draw a line parallel to AB using ruler and compasses only.

**Answer: To construct:** A line, parallel to given line by using ruler and compass.



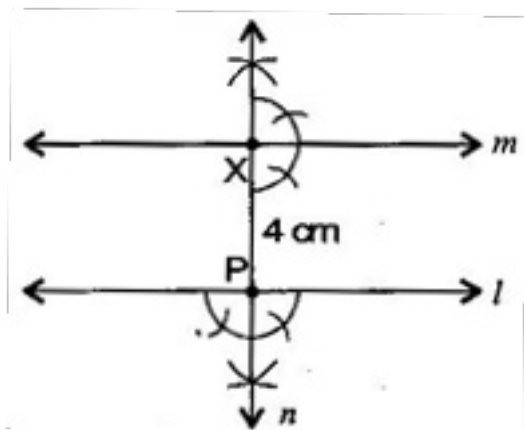
**Steps of construction:**

- (a) Draw a line-segment AB and take a point C outside AB.
- (b) Take any point D on AB and join C to D.
- (c) With D as centre and take convenient radius, draw an arc cutting AB at E and CD at F.
- (d) With C as centre and same radius as in step 3, draw an arc GH cutting CD at I.
- (e) With the same arc EF, draw the equal arc cutting GH at J.
- (f) Join JC to draw a line  $l$ .

This the required line  $AB \parallel l$ .

**Question 2.** Draw a line  $l$ . Draw a perpendicular to  $l$  at any point on  $l$ . On this perpendicular choose a point X, 4 cm away from  $l$ . Through X, draw a line  $m$  parallel to  $l$ .

**Answer: To construct:** A line parallel to given line when perpendicular line is also given.



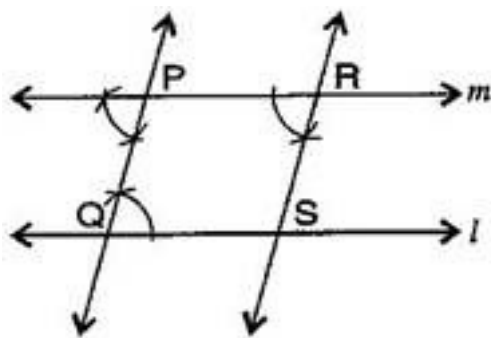
**Steps of construction:**

- (a) Draw a line  $l$  and take a point P on it.
- (b) At point P, draw a perpendicular line  $n$ .
- (c) Take  $PX = 4$  cm on line  $n$ .
- (d) At point X, again draw a perpendicular line  $m$ .

It is the required construction.

**Question 3.** Let  $l$  be a line and P be a point not on  $l$ . Through P, draw a line  $m$  parallel to  $l$ . Now join P to any point Q on  $l$ . Choose any other point R on  $m$ . Through R, draw a line parallel to PQ. Let this meet  $l$  at S. What shape do the two sets of parallel lines enclose?

**Answer: To construct:** A pair of parallel lines intersecting other part of parallel lines.



**Steps of construction:**

- (a) Draw a line  $l$  and take a point P outside of  $l$ .
- (b) Take point Q on line  $l$  and join PQ.
- (c) Make equal angle at point P such that  $\angle Q = \angle P$ .
- (d) Extend line at P to get line  $m$ .
- (e) Similarly, take a point R on line  $m$ , at point R, draw angles such that  $\angle P = \angle R$ .
- (f) Extended line at R which intersects at S on line  $l$ . Draw line RS.

Thus, we get parallelogram PQRS.