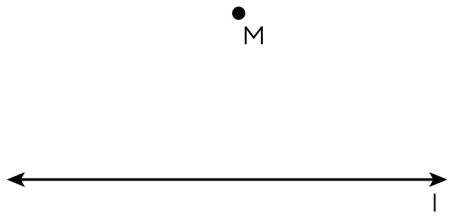
Construction of
Parallel and Perpendicular Lines

Do the following constructions and write the steps.

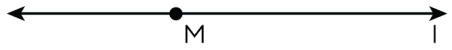
1 Construct a line parallel to the given line l and passing through the point M.

Steps:



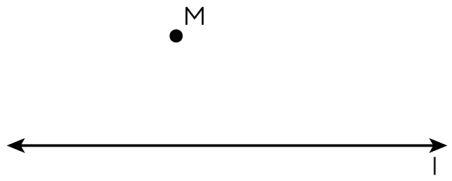
2 Consruct a perpendicular line to the given line l and passing through the point M.

Steps:



3 Construct a perpendicular line to the given line l and passing through the point M.

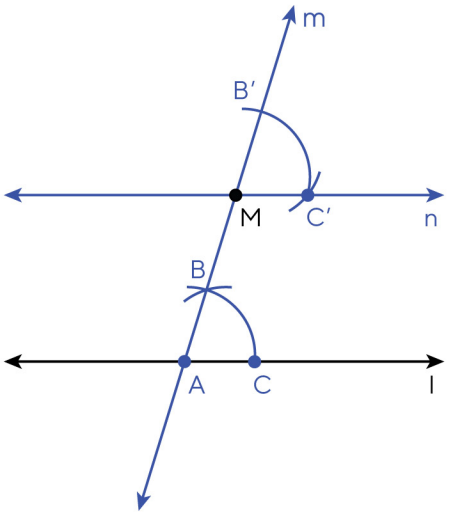
Steps:



Construction of
Parallel and Perpendicular Lines

Answers

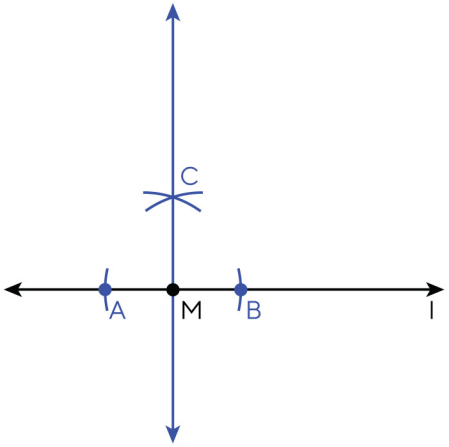
1



Steps:

1. Draw a line m through the point M that intersects line l. Mark this this point as A.
2. From the point A, draw an arc of any radius. Mark the points where the arc intersects lines l and m as C and B.
3. Construct an ∠M congruent to ∠A. Mark the points where the arc cuts lines n and m as C′ and B′.
4. Draw a line n passing through the points M and C′ that is parallel to the given line.

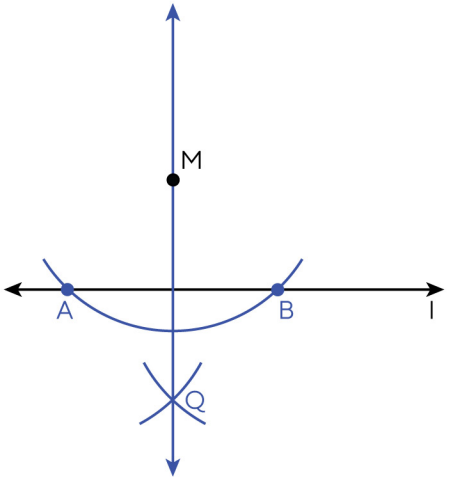
2



Steps:

1. Identify two points on l that are equidistant from M. Mark them as A and B.
2. Place a compass needle at A to draw an arc above M with a radius larger than half of AB.
3. Place the compass needle at B to draw another arc of the same radius above M that cuts the previous arc. Mark this point as C.
4. Draw the line CM that is perpendicular to the given line.

3



Steps:

1. Place a compass needle at M and draw an arc with a radius larger than the distance from M to l that intersects l at two points, say A and B.
2. Place the compass at A and draw an arc below line l with the radius more than half of AB.
3. Place the compass at B and draw another arc, of the same radius intersecting the previous arc. Mark this point as Q.
4. Draw the line MQ that is perpendicular to the given line.