NCERT SOLUTIONS FOR CLASS 6 MATHS PRACTICAL GEOMETRY EXERCISE 14.4

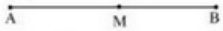
Exercise 14.4

Question 1:

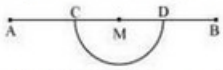
Draw any line segment $\overline{AB}$. Mark any point M on it. Through M, draw a perpendicular to $\overline{AB}$. (Use ruler and compasses)

Answer:

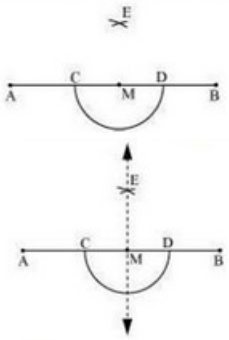
(1) Draw the given line segment $\overline{AB}$ and mark any point M on it.



(2) With M as centre and a convenient radius, construct an arc intersecting the line segment $\overline{AB}$ at two points C and D.



(3) With C and D as centres and a radius greater than CM, construct two arcs. Let these be intersecting each other at E.

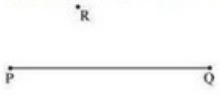


Question 2:

Draw any line segment $\overline{PQ}$. Take any point R not on it. Through R, draw a perpendicular to $\overline{PQ}$. (Use ruler and set-square)

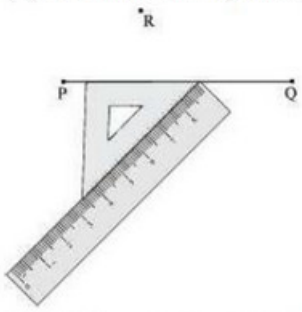
Answer:

(1) Take the given line segment $\overline{PQ}$ and mark any point R outside $\overline{PQ}$.

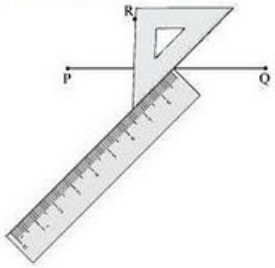


(2) Place a set square on $\overline{PQ}$ such that one arm of its right angle aligns along $\overline{PQ}$.

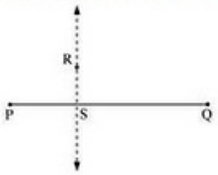
(3) Place the ruler along the edge opposite to the right angle of the set square.



(4) Hold the ruler fixed. Slide the set square along the ruler till the point R touches the other arm of the set square.



(5) Draw a line along this edge of the set square which will be passing through R. It is the required line, which is perpendicular to $\overline{PQ}$.



Question 3:

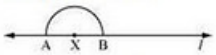
Draw a line *l* and point X on it. Through X, draw a line segment $\overline{XY}$ perpendicular to *l*.

Now draw a perpendicular to $\overline{XY}$ at Y. (use ruler and compasses)

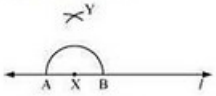
Answer:

(1) Draw a line *l* and mark a point X on it.

(2) Taking X as centre and with a convenient radius, draw an arc intersecting line *l* at two points A and B.



(3) With A and B as centres and a radius more than AX, construct two arcs intersecting each other at Y.



(4) Join XY. $\overline{XY}$ is perpendicular to *l*.

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