



Geometrical Constructions Ex 19.4 Q1

Answer :

45°

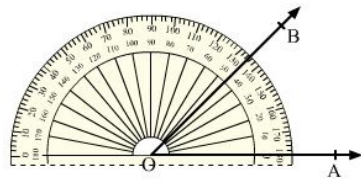
We draw a ray OA.

We place the protractor on OA such that its centre coincides with the point O and the diameter of the protractor coincides with OA.

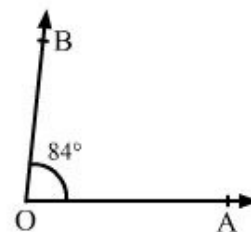
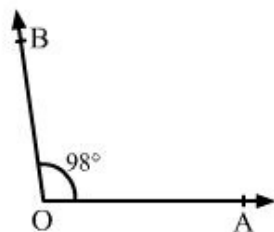
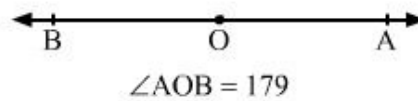
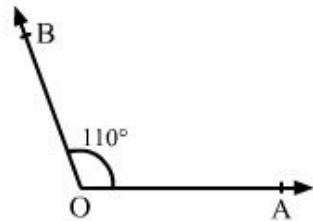
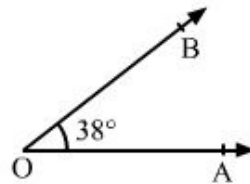
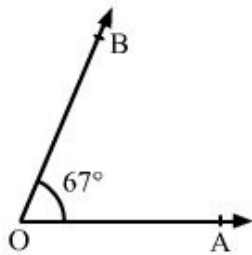
We mark a point B against the mark of 45° on the protractor

We remove the protractor and draw OB.

$\angle AOB$ is the required angle of 45°.



Similarly, we draw the angles of 67°, 38°, 110°, 179°, 98° and 84°.



Geometrical Constructions Ex 19.4 Q2

Answer :

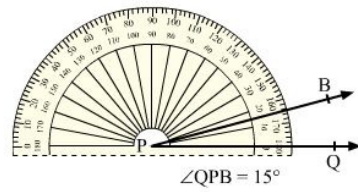
(i) Draw a ray PQ as given in the question.

Place the protractor on the ray PQ such that its centre coincides with the point P and the diameter of the protractor coincides with PQ.

Mark a point B against the mark of 15° on the protractor.

Remove the protractor and draw PB.

$\angle QPB$ is the required angle of 15° .



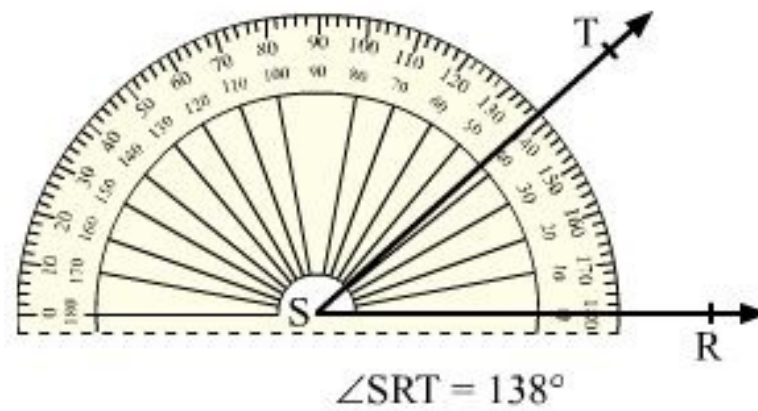
(ii) Draw a ray RS as given in the question.

Place the protractor on the ray RS such that its centre coincides with the point R and diameter of the protractor coincides with RS.

Mark a point T against the mark of 138° on the protractor.

Remove the protractor and draw RJ.

$\angle SRT$ is the required angle of 138° .



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