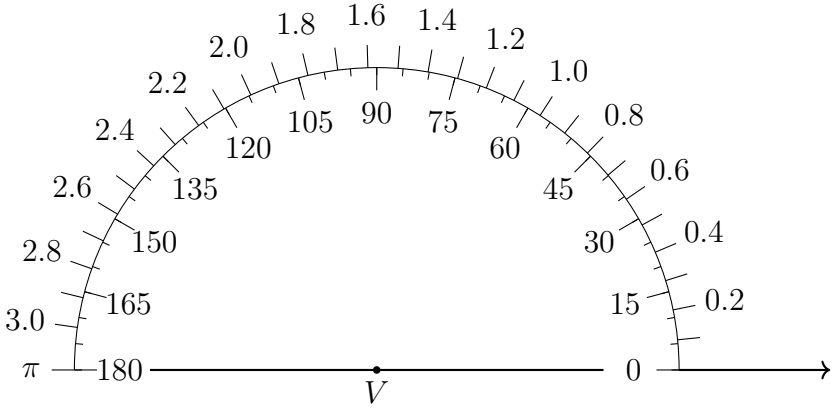
2.7 Test: Extension topics

Diagrams are not necessarily drawn to scale unless otherwise stated.

1. The protractor shown below is marked with degree measures on the inside and radian measures on the outside. Make a 1 radian angle by drawing a ray from the center V through the protractor semicircle.



2. Use the protractor above to convert radians and degrees. (nearest whole degree, nearest hundredth radian).

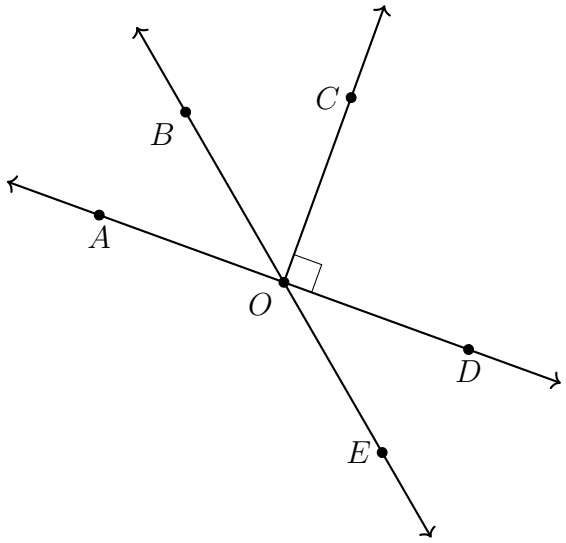
   (a) $80° =$

   (b) $28° =$

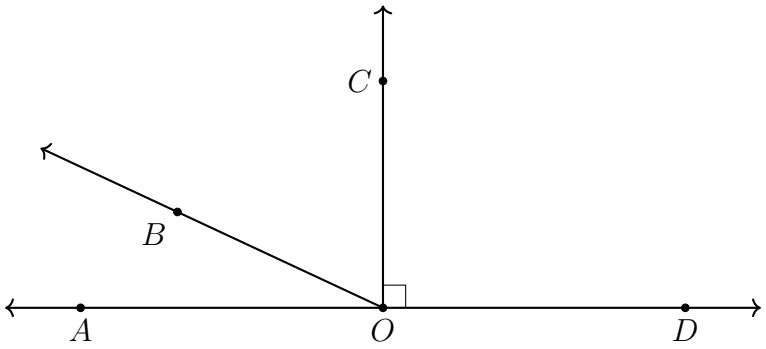
   (c) 1.0 radian $=$

   (d) 2.7 radian $=$

3. In the diagram below $\angle BOC = 7x - 50$ and $\angle DOE = 4x - 3$. Find m$\angle AOB$.



4. In the diagram below $\angle AOB = x - 7$ and $\angle COD = \frac{3}{4}(x + 57)$. Find $\angle BOC$



5. In the line segment $\overline{ABC}$, $\overline{AB}$ is twice as long as $\overline{BC}$. $AB = 12x - 6$ and $AC = 15x + 9$. Find BC.