Area of a Sector
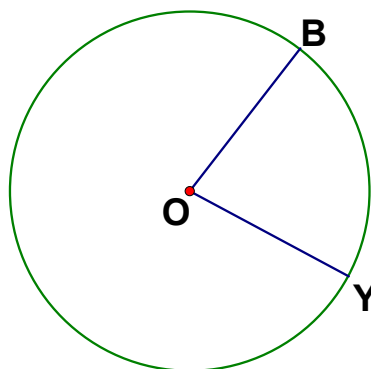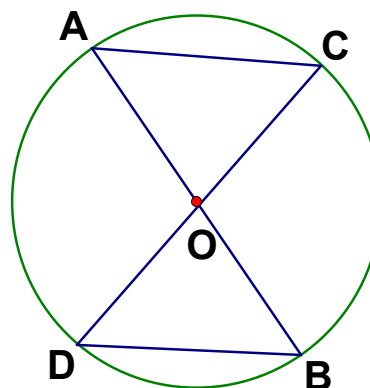
1. In circle O, $m\angle AOC = 70$ and $\overline{AO} = 2\ in$. Find the area of sector COA to the nearest square inch.
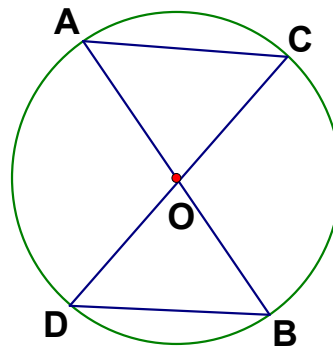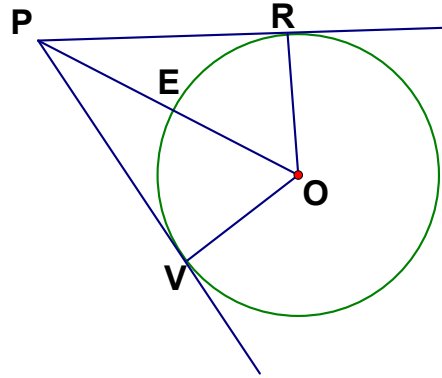

2. In circle O, if $\angle BOY = 80º$ and $\overline{BO} = 8\ cm$, find the area of sector BOY in terms of π.

3. In circle O, $m\angle AOC = 65$ and $\overline{DO} = 6\ in$. Find the area of sector COB in terms of π.

4. In circle O, tangents $\overline{PR}$ and $\overline{PV}$ are drawn. If $m\angle ROP = 80$ and $\overline{RO} = 4$ *cm*, find the area of sector ROE to the nearest tenth of a square cm.

5. In circle O, diameters $\overline{TA}$ and $\overline{CS}$ are drawn. If $m\angle COA = 60$ and $\overline{TA} = 10$ *cm*, find the area of sector SOA to the nearest hundredth of a square centimeter.
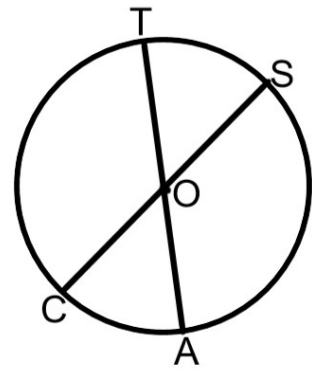
6. In circle O, diameter $\overline{SP}$ and radius $\overline{TO}$ are drawn. If $m\angle SOT = 40$ and $\overline{TO} = 2$ *meters*, find the area of sector TOP in terms of π.