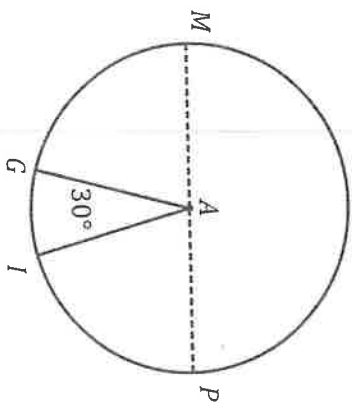## Section 9 – Topic 4
Sectors of a Circle

1. A circle has an **18**-inch radius and a shaded sector with a central angle of **50°**. Determine the area of the shaded sector.
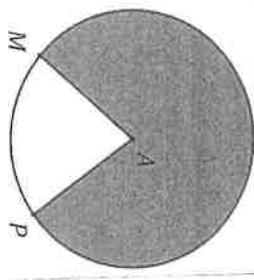
2. The area of a sector with a radius of 14 yards is 38.28 square yards. Calculate the approximate angle of the sector. Round to the nearest tenth.

3. In the diagram below of circle A, diameter $MP = 26$, $m\angle GAI = 30°$ and radii $\overline{GA}$ and $\overline{AI}$ are drawn.
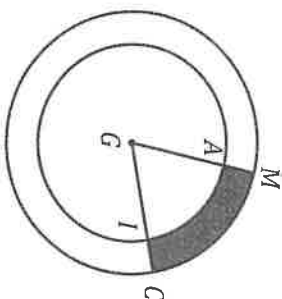

If $\overline{MG} \cong \overline{IP}$, find the area of the sector MAG in terms of π and approximate to the nearest hundredth.

4. Determine the area of the shaded sector in the circle below with the measure of major arc $\overparen{MP} = 280°$ and $MA = 32$ inches.

5. PaintsPlus LLC specializes in circular paint jobs. Their most recent job is modeled in the diagram below.

The two circles have center G, where radius $GI = 4$ feet, radius $MG = 6.5$ feet, and $m\angle MGC = 72°$. Determine the total cost to paint area $MCAI$ if the quoted price is **$40** per square foot. Leave your answers in terms of π until calculating the cost and then round to the nearest dollar.

ⓐ $670

ⓑ $680

ⓒ $660

ⓓ $620