Practice Exercises

A. Refer to the figure on the right to answer the following.

1. Name the angles that intercept $\overarc{AP}$.
2. Name the angles that intercept $\overarc{EV}$.
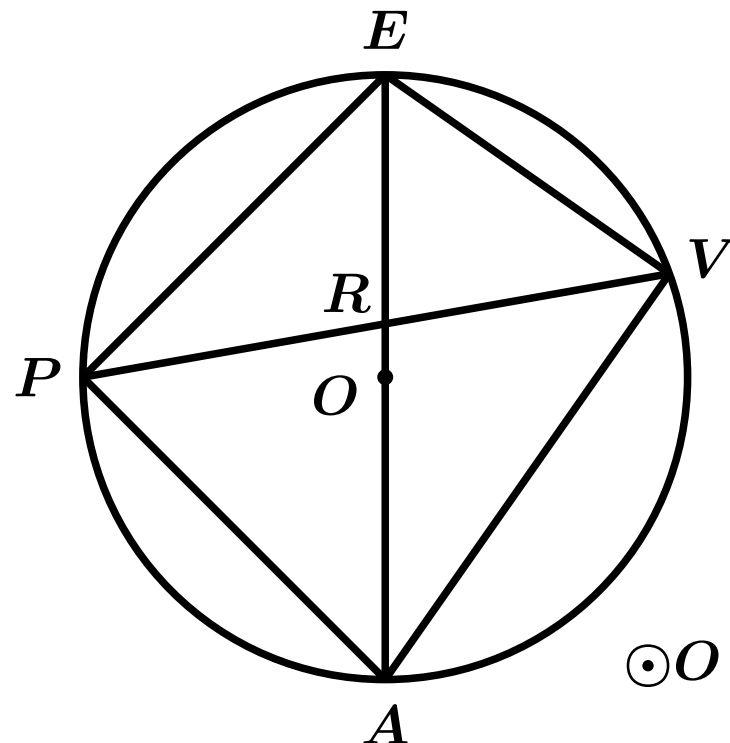3. Name the arc that is intercepted by $\angle PAE$.
4. Name the arc that is intercepted by $\angle EVP$.
5. If $m\angle PEA = 48$, then $m\overarc{AP} =$ ___ and $m\angle AVP =$ ___.
6. $m\angle EPA =$ ___
7. $m\angle EVP + m\angle PVA =$ ___
8. If $m\angle VEP = 100$, then $m\angle PAV =$ ___.

B. Use the given figures to find the value of x and y.

1.

   $75°$ at P, x

2.

   $38°$ at P, x

3.

   $110°$, x, P

4.

   $82°$, x, y

5.

   y, x, $72°$

6.

   x, $60°$, y, $100°$

7.

   $(2x+1)°$, $151°$

8.

   x, y, $115°$
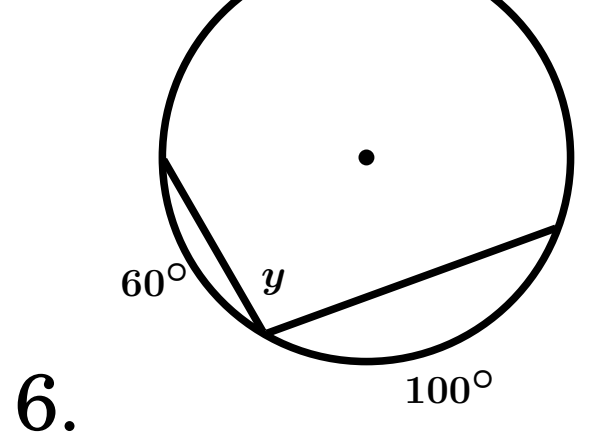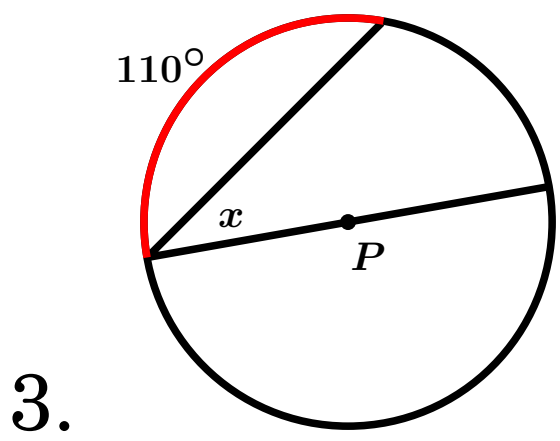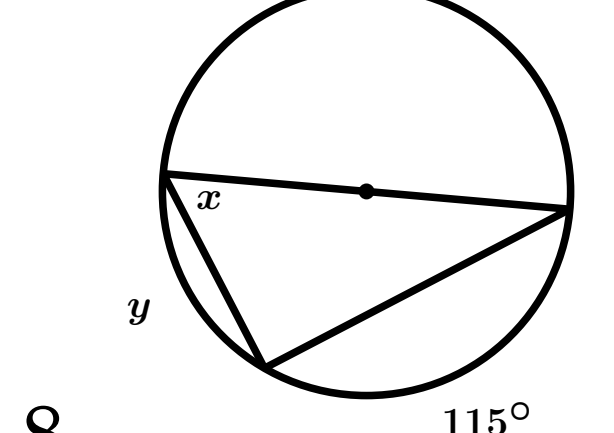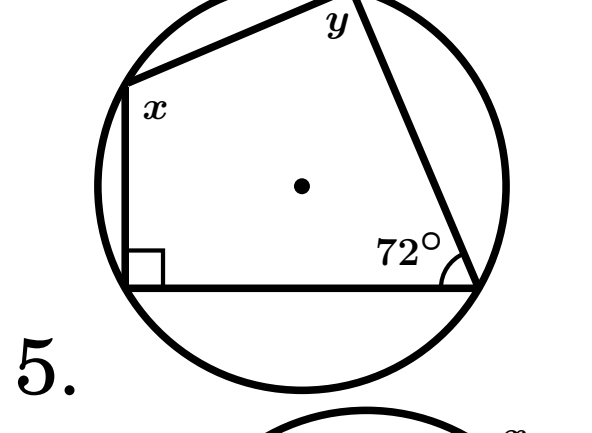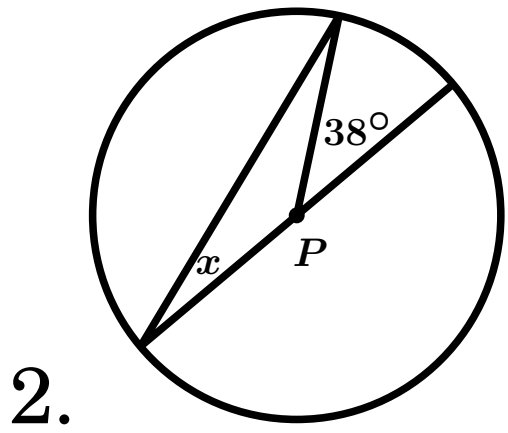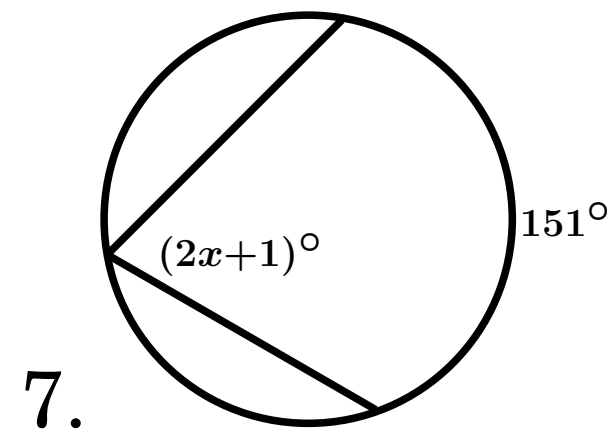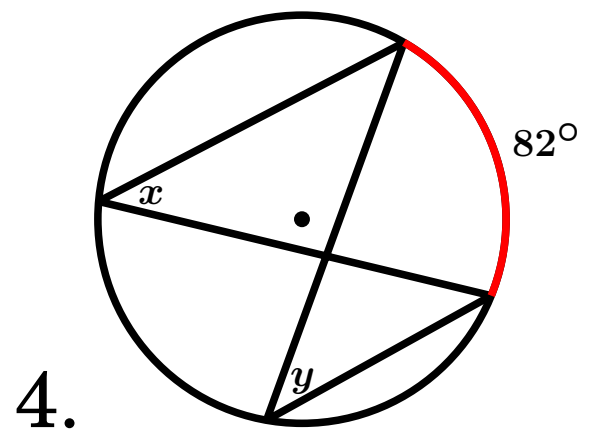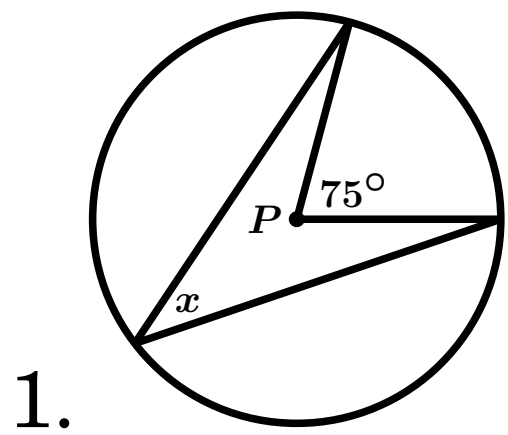
C. Given $\odot S$, $\overline{AR} \cong \overline{RO} \cong \overline{OS} \cong \overline{SA}$, $m\angle AMR = 3x + 20$ and $m\angle OMR = x + 30$. Find each measure.

1. x
2. $m\angle AMR$
3. $m\angle ORM$
4. $m\widehat{AM}$
5. $m\angle RNO$
6. $m\angle RAM$
7. $m\widehat{AR}$
8. $m\widehat{OM}$
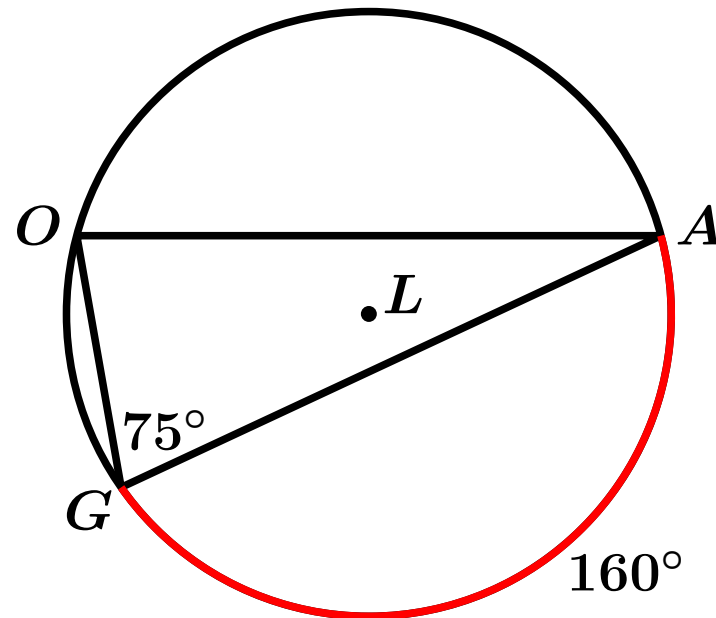9. $m\angle ROM$
10. $m\angle AMO$
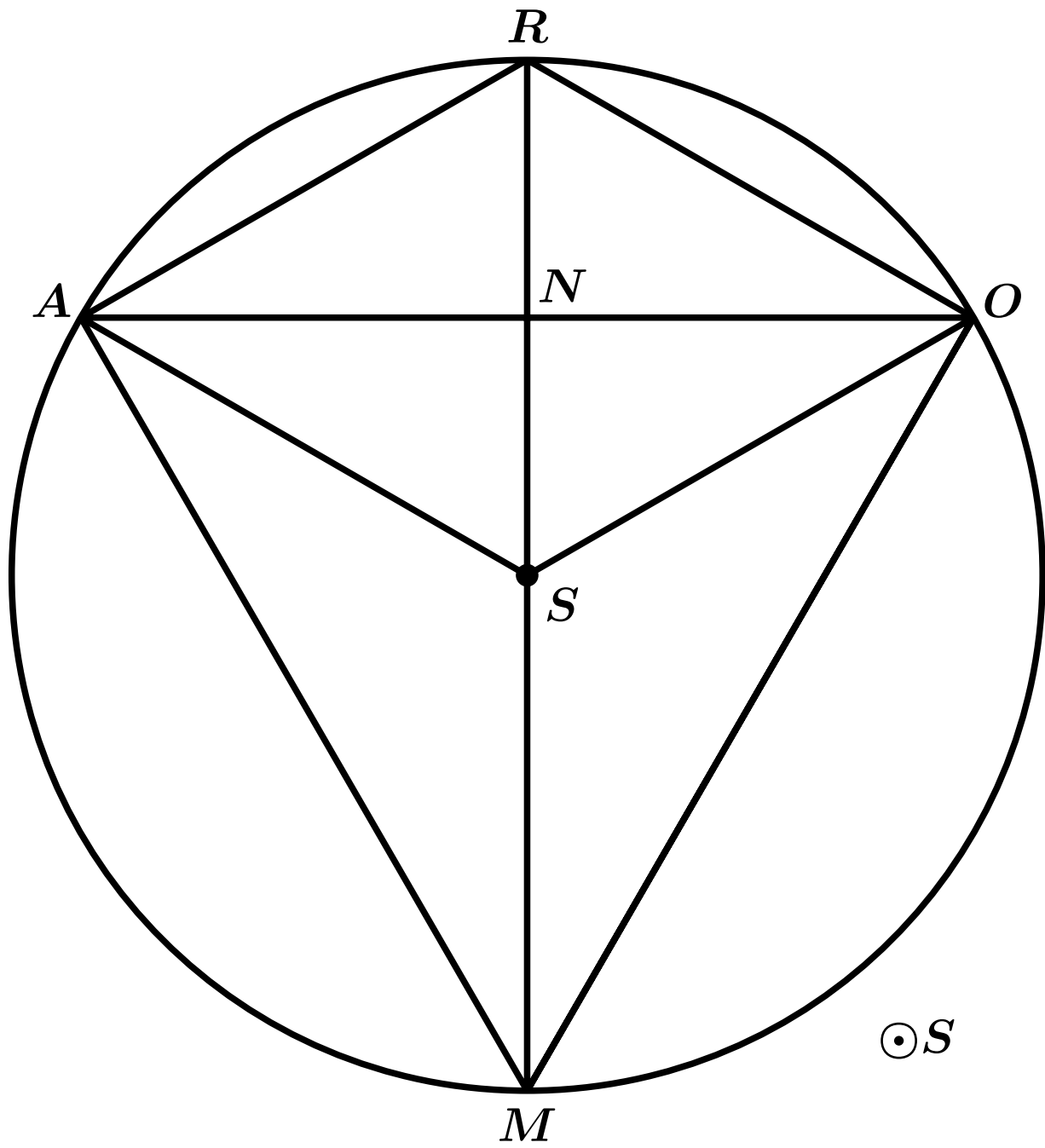
Problem Set

Use the given figures to answer the following.

A. $\triangle$GOA is inscribed in $\odot L$. If $m\angle OGA = 75°$ and $m\widehat{AG} = 160°$, find:

1. $m\widehat{OA}$
2. $m\widehat{OG}$
3. $m\angle GOA$
4. $m\angle GAO$

B. In $\odot F$, $\overline{AB}, \overline{BC}, \overline{CD}, \overline{BD}$, and $\overline{AC}$ are chords. Use the figure and the given information to answer the following questions.

1. If $m\angle CBD = 54°$, what is $m\widehat{CD}$?
2. If $m\widehat{AB} = 96°$, what is $m\angle ACB$?

3. If $m\angle ABD = 5x + 3$, and $m\angle DCA = 4x + 10$, find:

  a. x

  b. $m\angle ABD$

  c. $m\angle DCA$

  d. $m\overset{\frown}{AD}$

4. If $m\angle BDC = 6x - 4$, and $m\overset{\frown}{BC} = 10x + 2$, find:

  a. x

  b. $m\angle BDC$

  c. $m\overset{\frown}{BC}$

  d. $m\angle BAC$