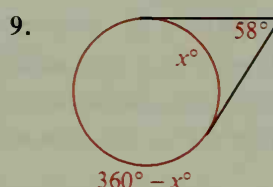
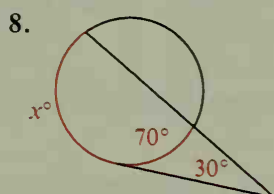
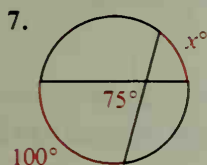


State an equation you could use to find the value of x . Then solve for x .



10. Supply reasons to complete a proof of Case I of Theorem 9-10.

Given: Secants \overline{PA} and \overline{PC}

Prove: $m\angle 1 = \frac{1}{2}(m\widehat{AC} - m\widehat{BD})$

Proof:

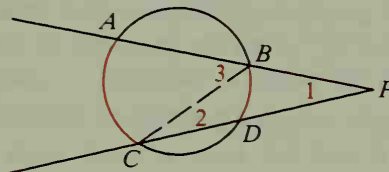
1. Draw chord \overline{BC} .

2. $m\angle 1 + m\angle 2 = m\angle 3$

3. $m\angle 1 = m\angle 3 - m\angle 2$

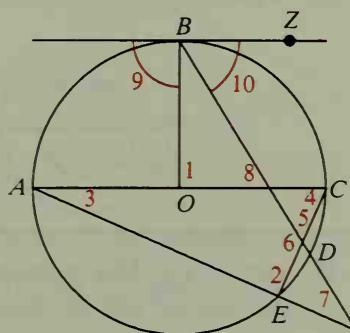
4. $m\angle 3 = \frac{1}{2}m\widehat{AC}$; $m\angle 2 = \frac{1}{2}m\widehat{BD}$

5. $m\angle 1 = \frac{1}{2}m\widehat{AC} - \frac{1}{2}m\widehat{BD}$, or $m\angle 1 = \frac{1}{2}(m\widehat{AC} - m\widehat{BD})$



Written Exercises

- A 1-10. \overrightarrow{BZ} is tangent to $\odot O$; \overline{AC} is a diameter; $m\widehat{BC} = 90$; $m\widehat{CD} = 30$; $m\widehat{DE} = 20$. Draw your own large diagram so that you can write arc measures alongside the arcs. Find the measure of each numbered angle.



Complete.

11. If $m\widehat{RT} = 80$ and $m\widehat{US} = 40$, then $m\angle 1 = \underline{\hspace{1cm}}$.
 12. If $m\widehat{RU} = 130$ and $m\widehat{TS} = 100$, then $m\angle 1 = \underline{\hspace{1cm}}$.
 13. If $m\angle 1 = 50$ and $m\widehat{RT} = 70$, then $m\widehat{US} = \underline{\hspace{1cm}}$.
 14. If $m\angle 1 = 52$ and $m\widehat{US} = 36$, then $m\widehat{RT} = \underline{\hspace{1cm}}$.

