

KEY

Geometry (H)  
Section 9.6 - Problems

$\overline{AD}$  and  $\overline{AE}$  are tangents,  $\overline{AC}$  is a secant, and  $\overline{GD}$  and  $\overline{FE}$  are chords.

1.  $m\widehat{DC} = 110$ ;  $m\widehat{DB} = 43$ ;  $m\angle 2 = \frac{67}{2} = 33\frac{1}{2} = \frac{1}{2}(110 - 43)$

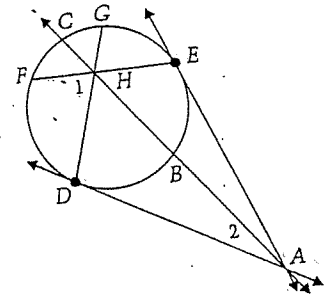
2.  $m\widehat{FD} = 70$ ;  $m\widehat{GE} = 50$ ;  $m\angle 1 = 60 = \frac{1}{2}(70 + 50)$

3.  $m\widehat{DCE} = 300$ ;  $m\angle DAE = 120 = \frac{1}{2}(300 - 60)$

4.  $m\angle DAE = 60$ ;  $m\widehat{DE} = 120$   
 $m\angle A = \frac{1}{2}(\text{large} - \text{small})$   
 $60 = \frac{1}{2}(360 - x - x)$   
 $x = 120$

5.  $m\widehat{FD} = 65$ ;  $m\angle 1 = 60$ ;  $m\widehat{GE} = 55 = 60 = \frac{1}{2}(65 + x)$

6.  $m\widehat{BD} = 50$ ;  $m\angle 2 = 20$ ;  $m\widehat{CD} = 90$

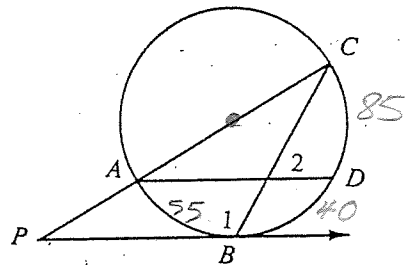


$m\widehat{AB} = 55$ ,  $m\widehat{BD} = 40$ ,  $\overline{AC}$  is a diameter and  $\overline{PB}$  is tangent to the circle at B.

1. Find  $m\angle P = 35 = \frac{1}{2}(125 - 55)$ ,  $CD = 85$

2. Find  $m\angle 2 = 70 = \frac{1}{2}(85 + 55)$

3. Find  $m\angle 1 = \frac{235}{2} = 117\frac{1}{2} = \frac{1}{2}(180 + 55)$



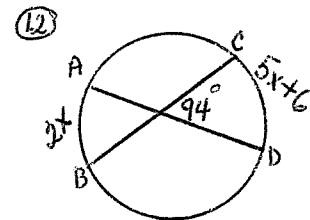
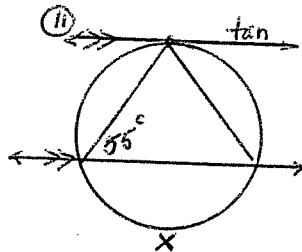
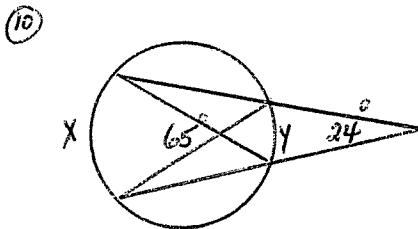
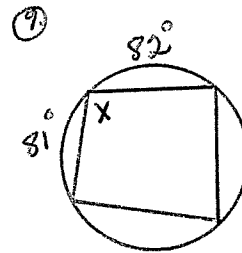
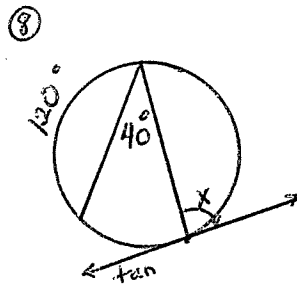
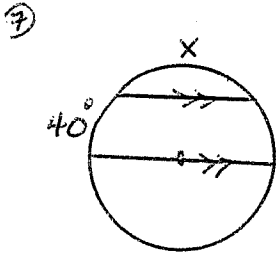
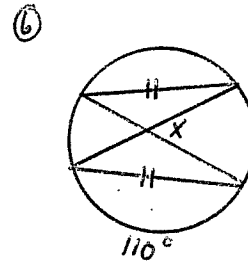
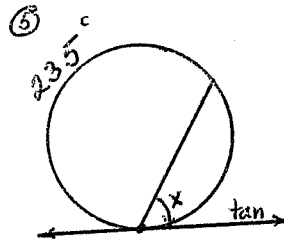
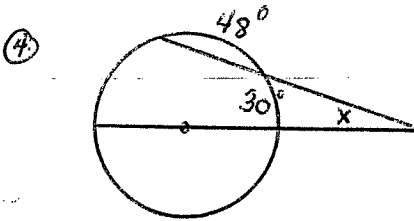
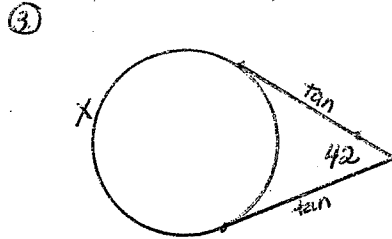
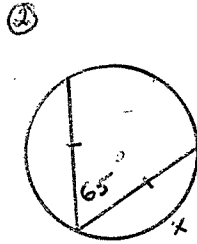
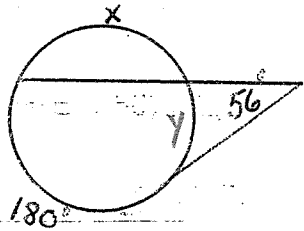
4. Is  $\overline{AD} \parallel \overline{PB}$ ? Explain.

No, if  $\overline{AD} \parallel \overline{PB}$ , then  $\widehat{AB} \cong \widehat{BD}$   
 but  $AB \neq BD$ . Therefore,  $\overline{AD} \nparallel \overline{PB}$ .

Geometry (H)

Section 9.5 & 9.6 – More problems

Name: \_\_\_\_\_



Find AB.