Aim: What are some chord/angle relationships?

Do Now: Find the measure of the following angles:
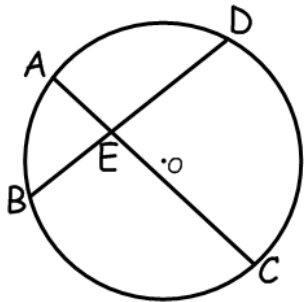
<1=

<2=

<3=

<4=

40°   80°

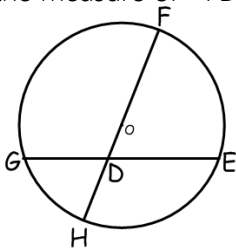--
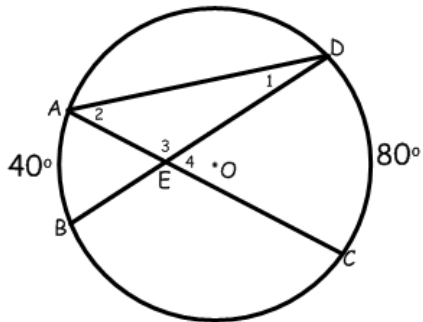
Angle Formed Inside of a Circle by Two Intersecting Chords

1. If the m$\widehat{AB}$=50° and m$\widehat{DC}$=100°, what is the measure of <AEB?

2. If the measure of <FDE is 83° and the measure of $\widehat{FE}$ is 124°, what is the measure of $\widehat{GH}$?

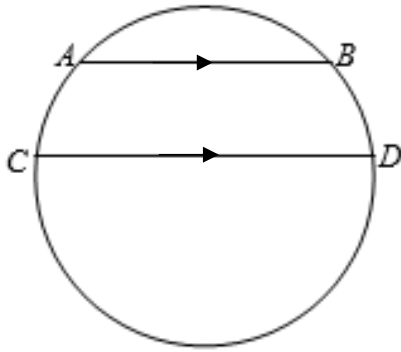--

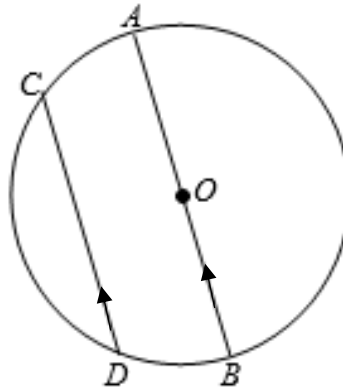In circle O, chords AB and CD are congruent. What can we say about $\widehat{AB}$ and $\widehat{DC}$?
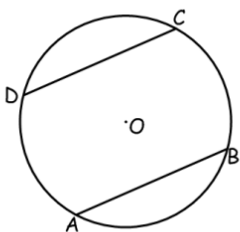
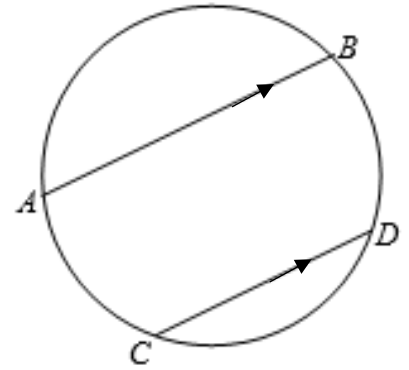If chords AB and CD are parallel, what can we say about $\widehat{AD}$ and $\widehat{CB}$?
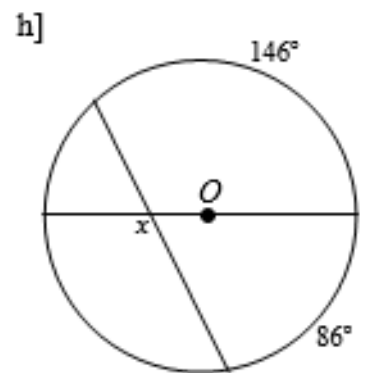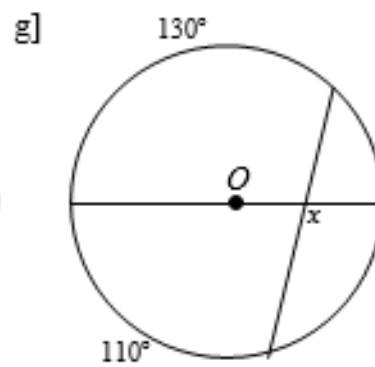
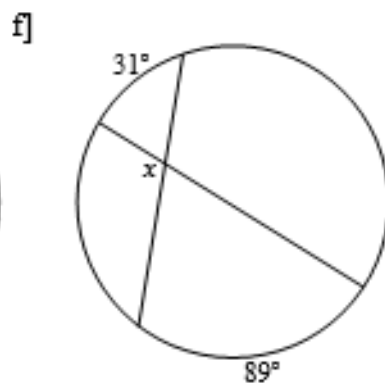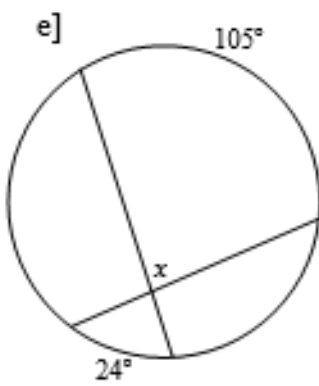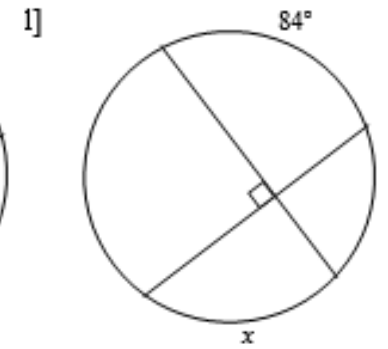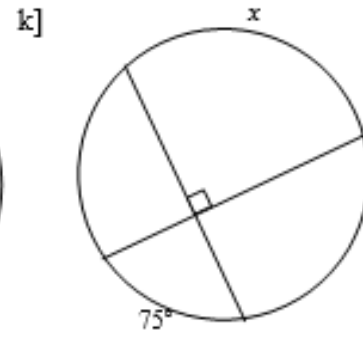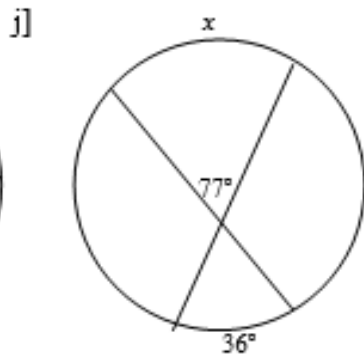1a] If $m\widehat{AC} = 30°$, what is $m\widehat{BD}$? b] If $m\widehat{AC} = 25°$, what is $m\widehat{CD}$? c] $m\widehat{AC}:m\widehat{CD}:m\widehat{AB} = 1:3:4$
Find all arc measures.

2. Find the value of x:

a] 109° 61° x

b] 85° x 87°

c] 42° x 44°

d] 63° x 92°

e] 105° x x 24°

f] 31° x 89°

g] 130° O x 110°

h] 146° O x 86°
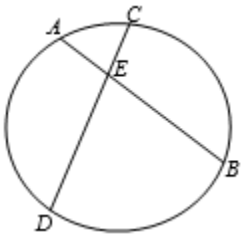
i]

93° x 101°

j]

x 77° 36°

k]

x 75°

1]

84° x
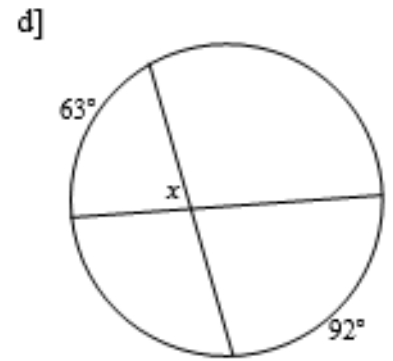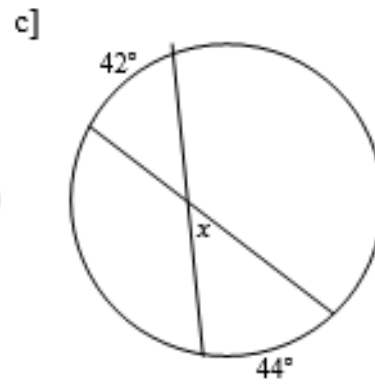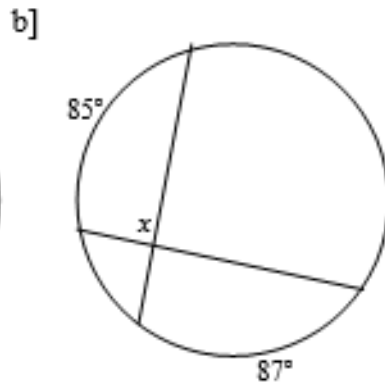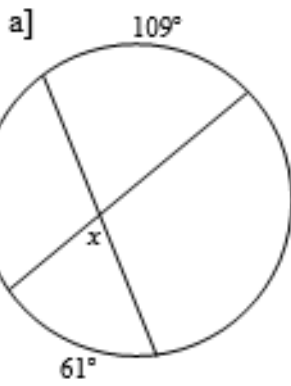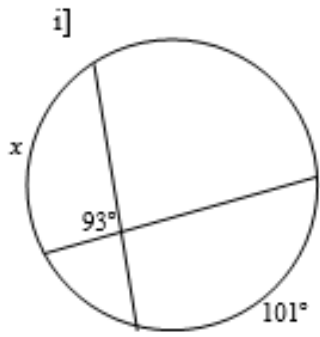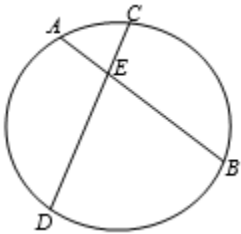
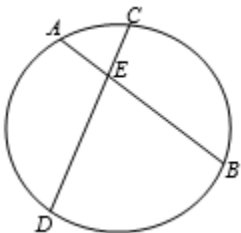3) Chords $\overline{AB}$ and $\overline{CD}$ of the circle intersect at *E*.

a] If $m\widehat{CB} = 120°$, and $m\widehat{AD} = 130°$, find $m\angle AED$.
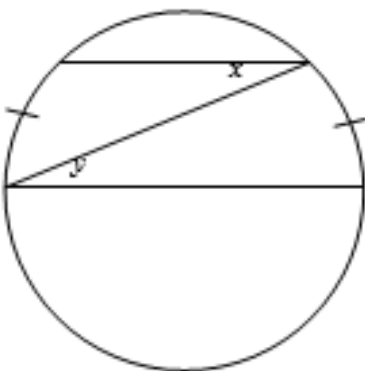
b] If $m\widehat{AC} = 30°$, and $m\angle AEC = 55°$, find *mBD*.

c] If $m\angle AED = 80°$, and $m\widehat{CB} : m\widehat{DA} = 3{:}5$, find *mDA*.

4. Are angles *x* and *y* congruent? If so, how do you know?

5. Find the missing angle/arc indicated

a]

97° x• O

b]

x

113°

c]

160° x

O

d] 78°

x O

98°

e]

O
x

112°

f] x

23° O

g]

O

x

210°

h] 179°

O

x

62°

i]

O

x

j] 97°

O

x

78°

k]

31°
O
x

l]

O

x