2(VA)=arc+arc
2(vertical angle)=arc+arc

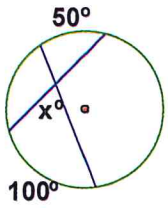
Name: Schlansky
Mr. Schlansky

Date: _____
Geometry

Intersecting Chords (Angles)

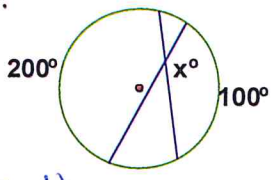
Find x in each of the following

1.



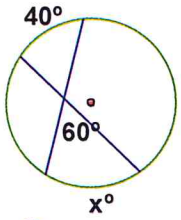
2(VA)=arc+arc
2x=50+100
$\frac{2x}{2}=\frac{150}{2}$
x=75

2.



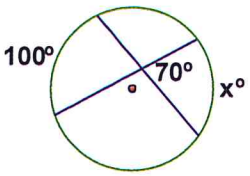
2(VA)=arc+arc
2x=200+100
$\frac{2x}{2}=\frac{300}{2}$
x=150

3.



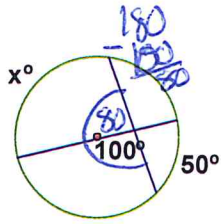
2(VA)=arc+arc
2(60)=x+40
120=x+40
-40 -40
80=x

4.



2(VA)=arc+arc
2(70)=x+100
140=x+100
-100 -100
40=x

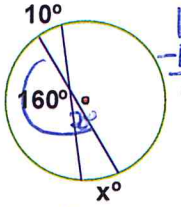
5.



180
-100
80

2(VA)=arc+arc
2(80)=x+50
160=x+50
-50 -50
110=x

6.



180
-160
20

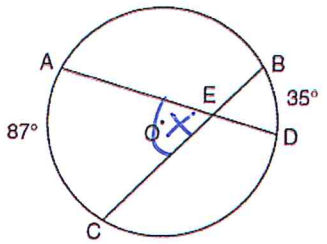
2(VA)=arc+arc
2(20)=x+10
40=x+10
-10 -10
30=x

7. In the diagram below of circle O, chords $\overline{AD}$ and $\overline{BC}$ intersect at E, $m\overset{\frown}{AC} = 87$, and $m\overset{\frown}{BD} = 35$.

What is the degree measure of $\angle CEA$?

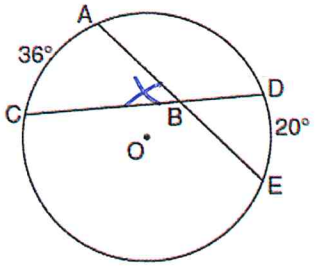
1) 87
2) 61
3) 43.5
4) 26

2(VA)=arc+arc
2x=87+35
$\frac{2x}{2}=\frac{122}{2}$
x=61



8. In the diagram below of circle O, chords $\overline{AE}$ and $\overline{DC}$ intersect at point B, such that $m\overset{\frown}{AC} = 36$ and $m\overset{\frown}{DE} = 20$.

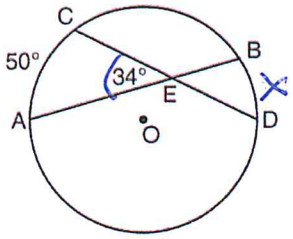
$2(VA) = arc + arc$
$2x = 36 + 20$
$\frac{2x}{2} = \frac{56}{2}$
$x = 28$



What is $m\angle ABC$?
1) 56
2) 36
3) 28
4) 8

9. In the diagram below of circle O, chords $\overline{AB}$ and $\overline{CD}$ intersect at E.

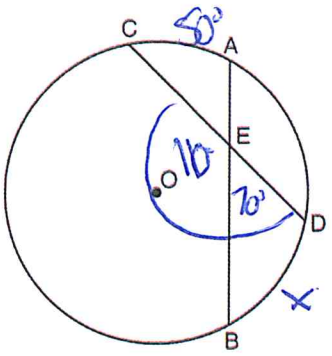
$2(VA) = arc + arc$
$2(34) = x + 50$
$68 = x + 50$
$-50 \quad -50$
$18 = x$



If $m\angle AEC = 34$ and $m\overset{\frown}{AC} = 50$, what is $m\overset{\frown}{DB}$?
1) 16
2) 18
3) 68
4) 118

10. In the diagram below of circle O, chords $\overline{AB}$ and $\overline{CD}$ intersect at E.

$180 - 110 = 70°$



If $m\angle CEB = 110°$ and $m\overset{\frown}{AC} = 50$, what is $m\overset{\frown}{DB}$?

$\overset{\frown}{DB} = 70°$