Geometry

Name Hunt

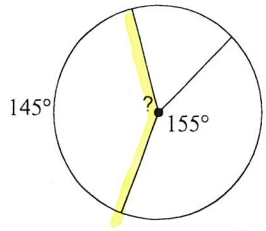
4A Review Angles in Circles

Date_____ Period____

Find the measure of the arc or central angle indicated. Assume that lines which appear to be diameters are actual diameters.

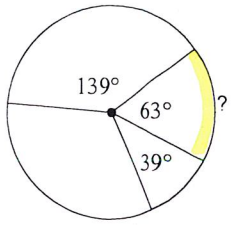
1)

Central ∡ = Arc



? = 145°

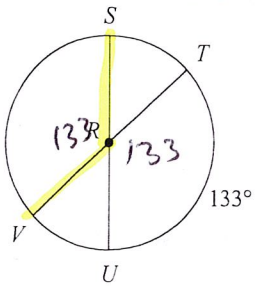
2)



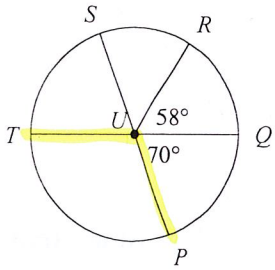
? = 63°

3) $m\angle VRS$

= 133°



4) $m\angle PUT$

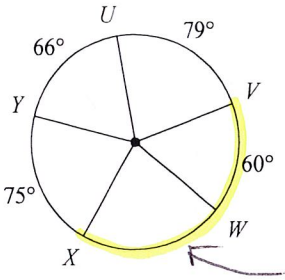


use the linear pair

180 − 70

= 110°

5) $m\widehat{VX}$



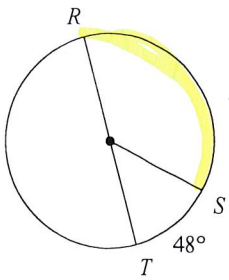
$\widehat{VX}$ = 80 + 60

= 140°

Find this first

360 − 75 − 66 − 79 − 60 = 80

6) $m\widehat{RS}$



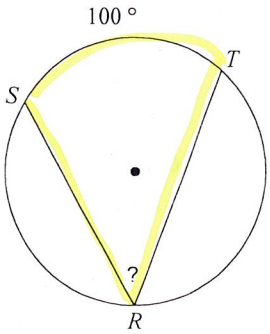
Semicircle

180 − 48

= 132°

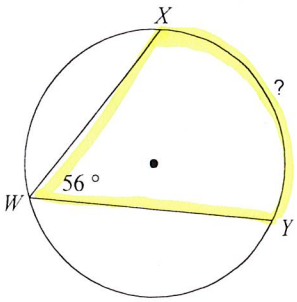
Find the measure of the arc or angle indicated.

7)



? = $\frac{100}{2}$ = 50°

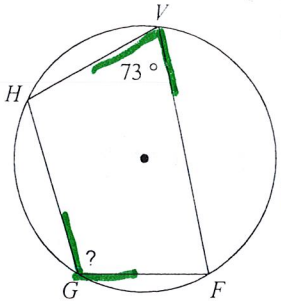
8)



? = 56 * 2

= 112°

9)

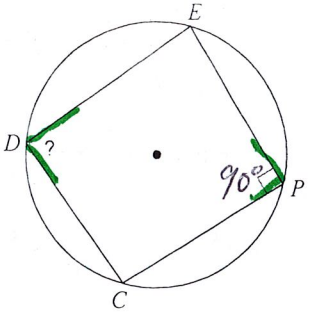


Opposite ∠s are Supplementary

180 − 73

= 107°

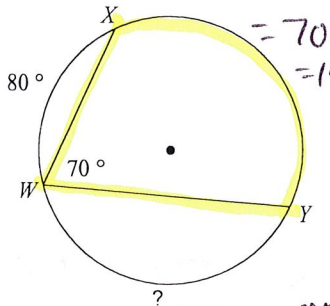
10)



180 − 90

= 90°

11)



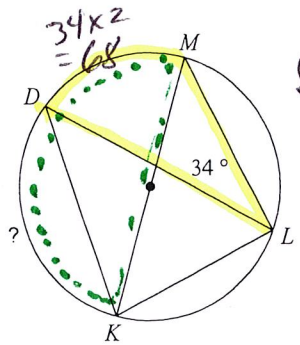
= 70 × 2

= 140

= 360 − 80 − 140

= 140°

12)



34 × 2

= 68

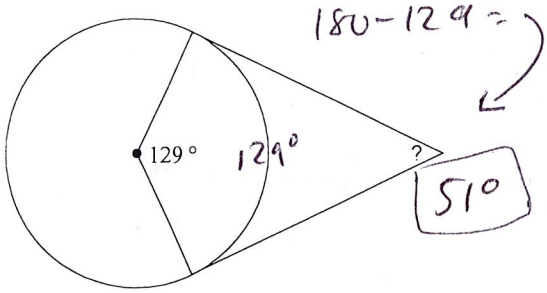
Semicircle = 180

180 − 68

= 112°

Find the angle measure indicated. Assume that lines which appear to be tangent are tangent.

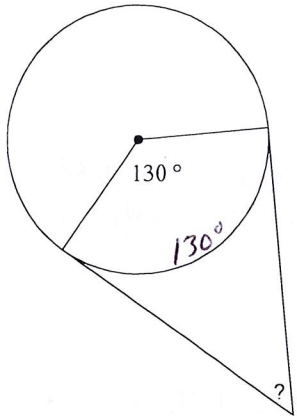
13)



180 − 129 =

51°

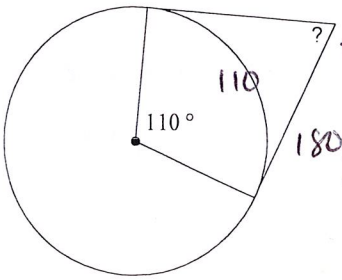
14)



180 − 130 =

50°

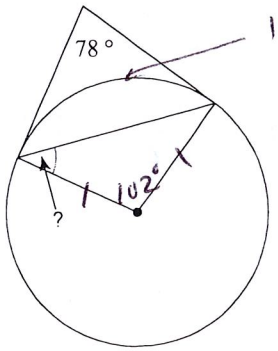
15)



180 − 110

= 70°

16)



180 − 78

= 102°

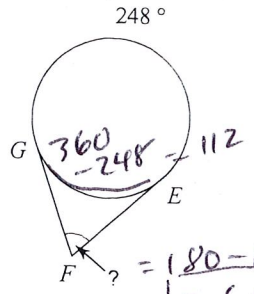
use the isos Δ

180 − 102 = 78

$\frac{78}{2}$ = 39°

Find the measure of the arc or angle indicated. SHOW the equation needed to find the answer.

17)

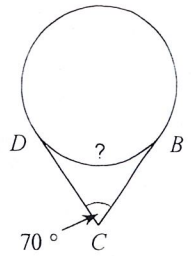


360 − 248 = 112

= 180 − 112

$\boxed{= 68°}$

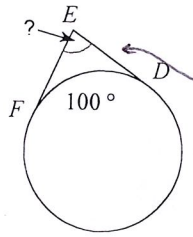
18)



180 − 70

= 110°

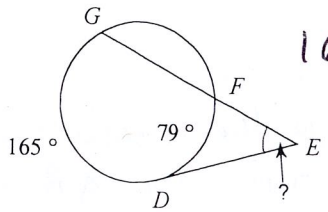
19)



180 − 100

$\boxed{= 80°}$

20)

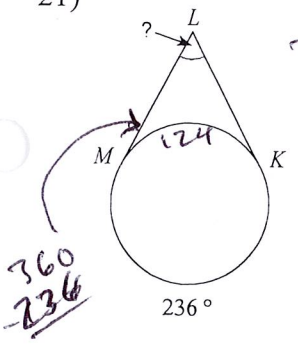


$\frac{165 - 79}{2} = ?$

$\frac{86}{2} =$

$\boxed{43°}$

21)

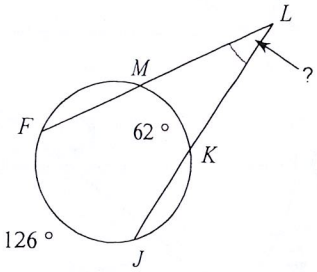


360
− 236

$\frac{236 - 124}{2} = ?$

$\boxed{56° = ?}$

22)

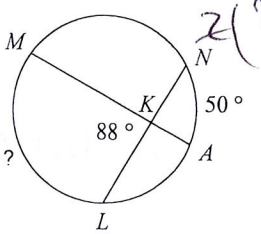


$\frac{126 - 62}{2} = ?$

$\frac{64}{2} = ?$

$\boxed{32° = ?}$

23)



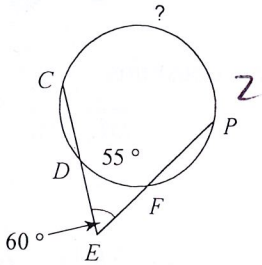
$\cancel{2}\left(\frac{x+50}{\cancel{2}}\right) = 88(2)$

x + 50 = 176

− 50 − 50

$\boxed{x = 126°}$

24)



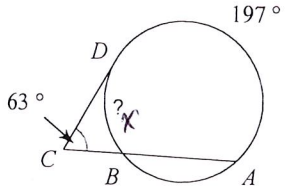
$2\left(\frac{x - 55}{2}\right) = 60\ (2)$

x − 55 = 120

+ 55 + 55

$\boxed{x = 175°}$

25)



$\frac{197 - x}{2} = 63$

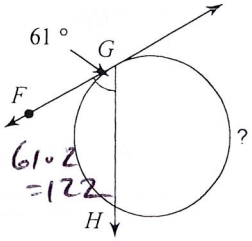
197 − x = 126

− 197 − 197

−x = −71

$\boxed{x = 71}$

26)



61 · 2 = 122

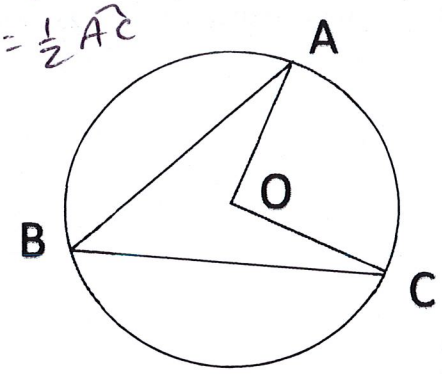
360 − 122

$\boxed{= 238°}$

Use the diagram for #1-4 below.

$\widehat{AC} = \measuredangle O$

$\measuredangle B = \frac{1}{2}\widehat{AC}$



1. $\angle O = 115°$ $\angle B =$ 57.5°

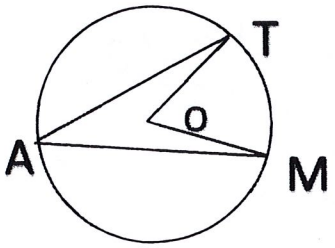
2. $\angle O = 122°$ $\angle B =$ 61°

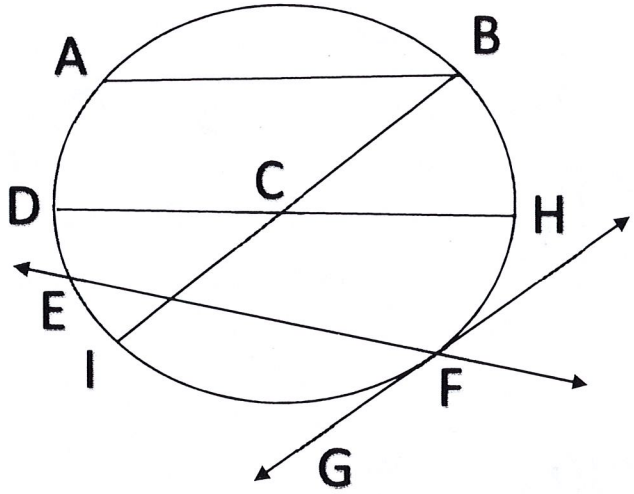
3. $\angle B = 47°$ $\angle O =$ 94°

4. $AC = 132°$ $\angle O =$ 132° $\angle B =$ 66°

5. Describe the relationship between $\angle A$ and $\angle O$.

m∡O is equal to the measure of $\widehat{TM}$
m∡A is half of $\widehat{TM}$. So ∡A is half of ∡O.





Use the figure to answer the following questions.

29. $\overline{EF}$ is a Chord

30. $\overline{BC}$ is a Radius

31. $\overline{FG}$ is a Tangent

32. $\overline{AB}$ is a Chord

33. $\overline{DH}$ is a Diameter

34. $\widehat{AB}$ is a Minor Arc

35. $\widehat{DBH}$ is a Semicircle

36. $\widehat{EFB}$ is a Major Arc

37. ∠BCH is a Central ∡

38. ∠ABI is a Inscribed ∡