11/12

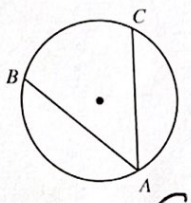
Kuta Software - Infinite Geometry Name_____

Inscribed Angles

Date_____ Period____

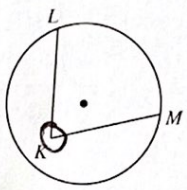
State if each angle is an inscribed angle. If it is, name the angle and the intercepted arc.

1)



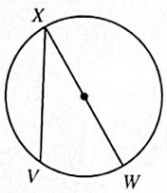
YES ∠BAC, $\overset{\frown}{BC}$

2)



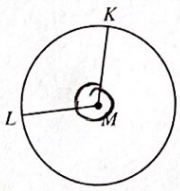
No

3)



YES ∠VXW, $\overset{\frown}{VW}$

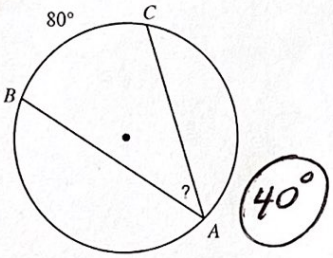
4)



No

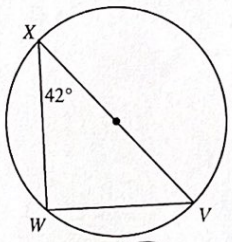
Find the measure of the arc or angle indicated.

5)



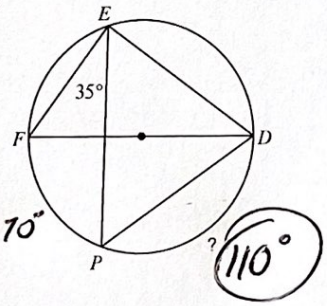
40°

6)



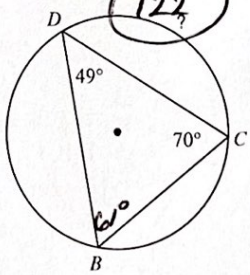
84°

7)



110°

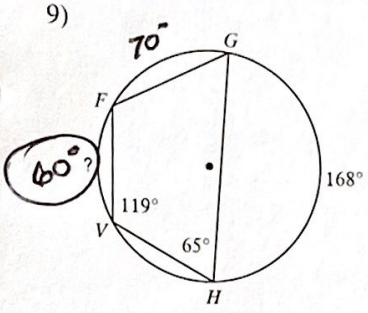
8)



122°

180 - 70 - 49 = 61°

9)



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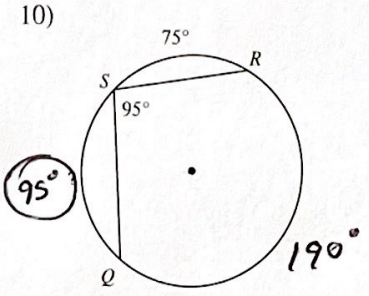
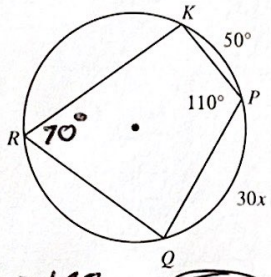


360-190-75 = 95°

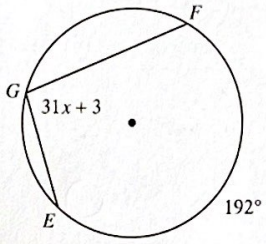
Solve for x.

11)



50+30x=140
30x=90
x=3

12)

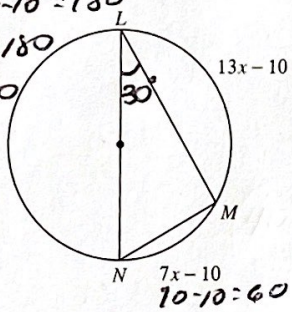


2(31x+3) = 192
62x + 6 = 192
62x = 186
x = 3

Find the measure of the arc or angle indicated.

13) Find $m\angle NLM$ = 30°

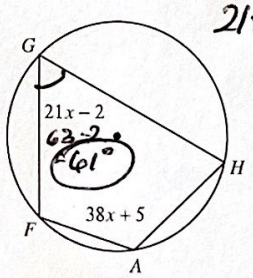
13x-10 + 7x-10 = 180
20x-20 = 180
20x = 200
x = 10



10-10 = 60

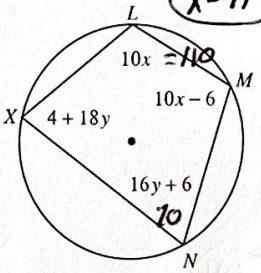
14) Find $\overset{\frown}{mFGH}$

21x-2+38x+5 = 180
59x+3 = 180
59x = 177
x = 3



Solve for x and y.

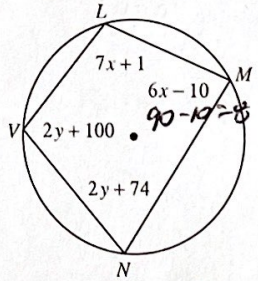
15)



x = 11

10x + 16y + 6 = 180
−(10x + 18y − 2 = 180)
−2y + 8 = 0
−2y = −8
y = 4

16)



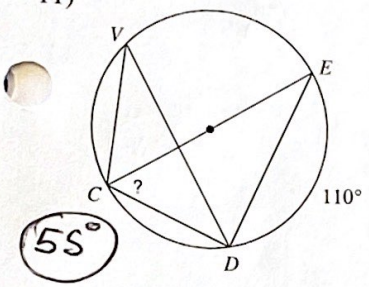
90-10 = 8

2y+100 = 100
y = 0

2y + 6x + 90 = 180
−(2y + 7x + 75 = 180)
−x + 15 = 0
x = 15

Find the measure of the arc or angle indicated.

11)



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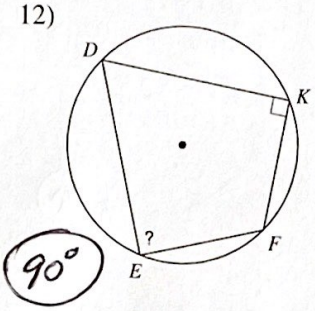

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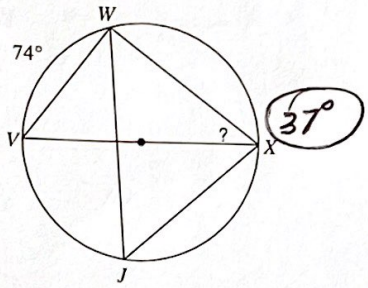

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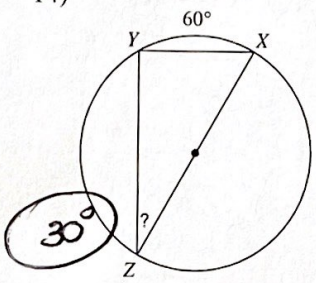

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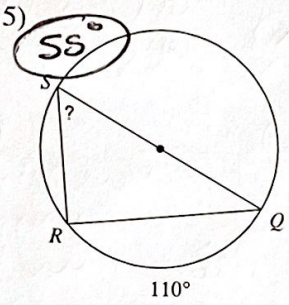

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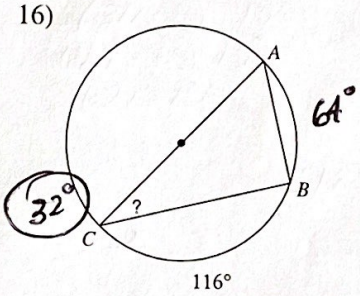

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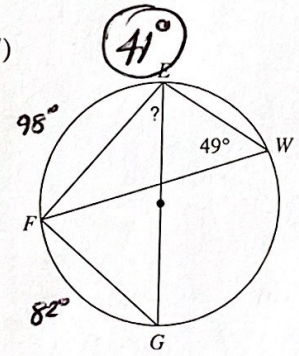

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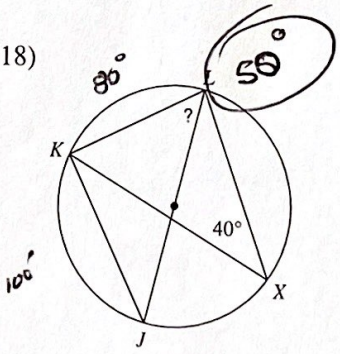

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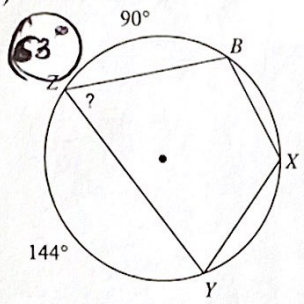
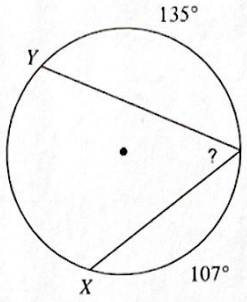


63°

126°

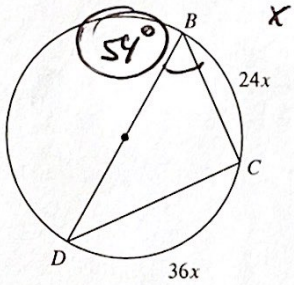
20)



118

59°

21) Find $m\angle DBC$



54°

$60x = 180$

$x = 3$

108

22) Find $m\angle LPQ$

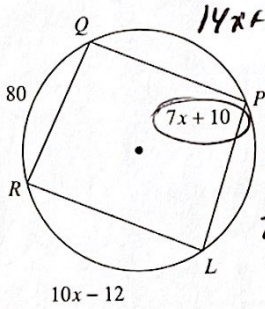
$2(7x+10) = 80 + 10x - 12$

$14x + 20 = 68 + 10x$

$4x = 48$

$x = 12$

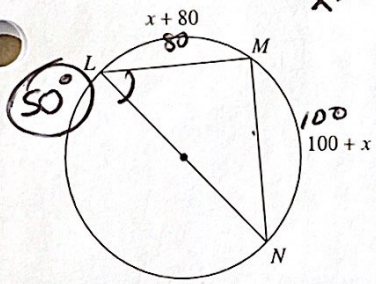
$7(12) + 10 =$ 94°



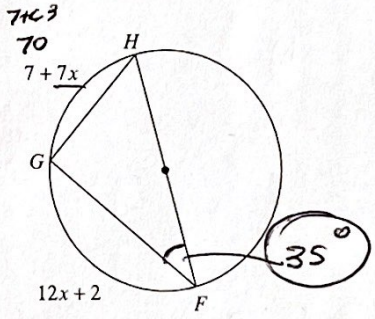
23) Find $m\angle NLM$

$x + 80 + 100 + x = 180$

$x = 0$



24) Find $m\angle HFG$



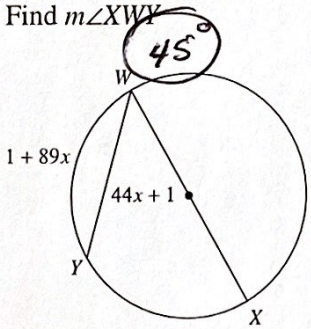
$7 + 7x + 12x + 2 = 180$

$19x + 9 = 180$

$19x = 171$

$x = 9$

25) Find $m\angle XWY$



$1 + 89x + 2(44x + 1) = 180$

$1 + 89x + 88x + 2 = 180$

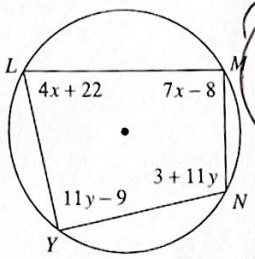
$177x + 3 = 180$

$177x = 177$

$x = 1$

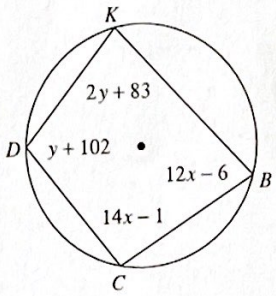
Solve for x and y.

26)



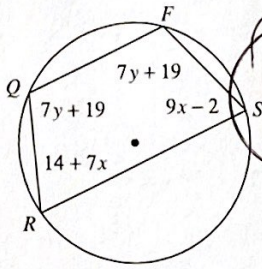
x=14
y=9

27)



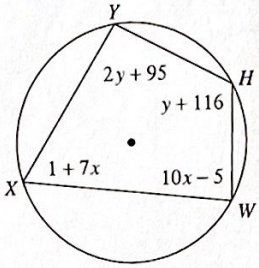
x=7
y=0

28)



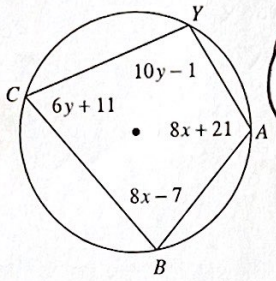
x=8
y=13

29)



x=9
y=0

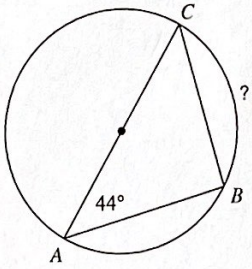
30)



x=11
y=10

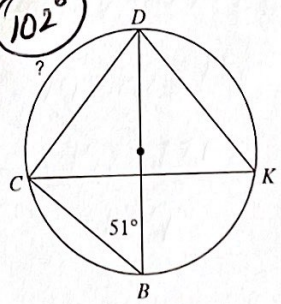
Find the measure of the arc or angle indicated.

31)



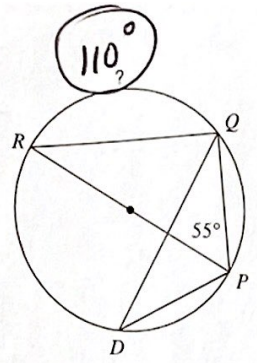
88°

32)



102°

33)



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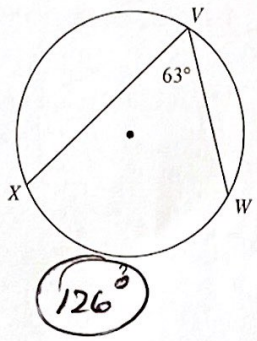

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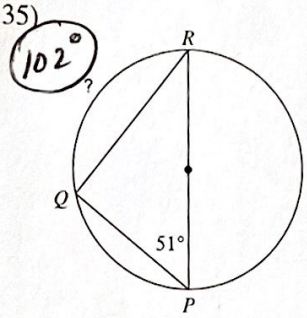

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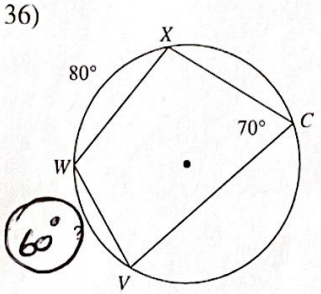

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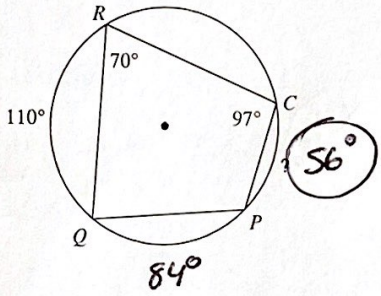

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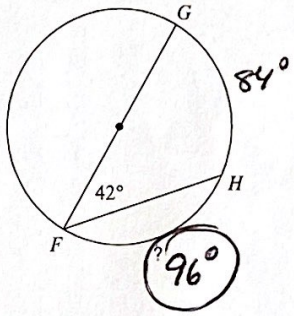

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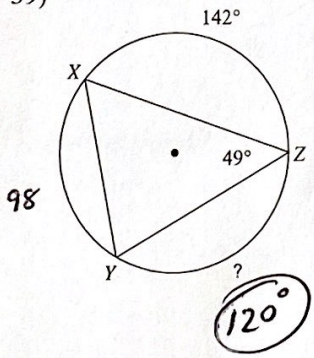

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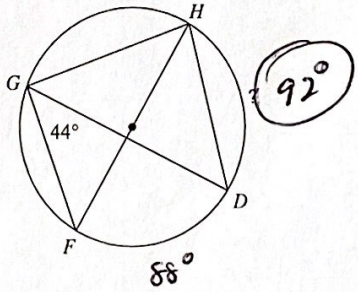
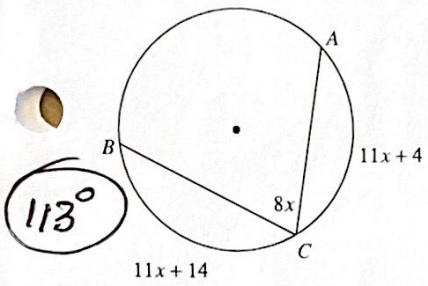
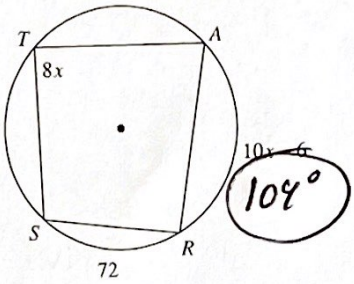


41) Find $m\widehat{CB}$



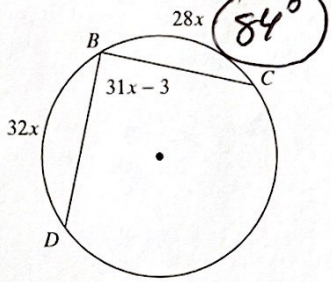
113°

42) Find $m\widehat{AR}$



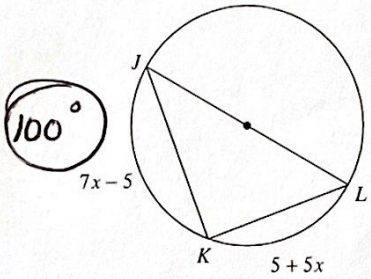
104°

43) Find $m\widehat{BC}$



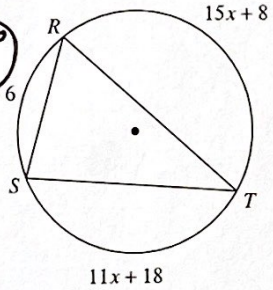
84°

44) Find $m\widehat{KJ}$



100°

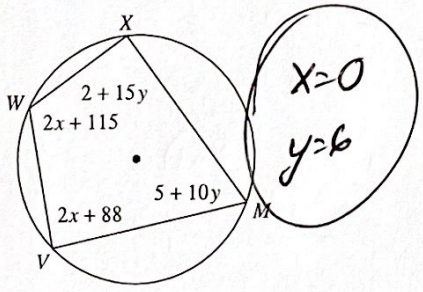
45) Find $m\widehat{SR}$



74°

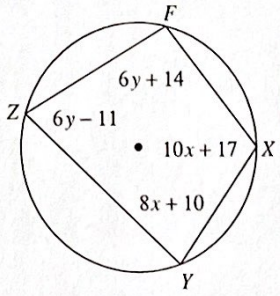
Solve for x and y.

46)



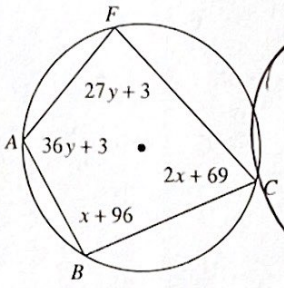
x=0
y=6

47)



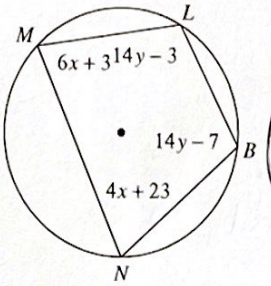
x=9
y=14

48)



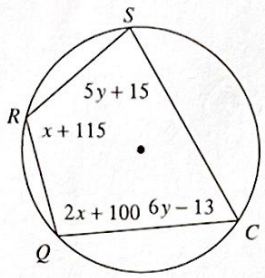
X=0
y=3

49)



X=12
y=8

50)



X=0
y=13