Name _____ Date _____

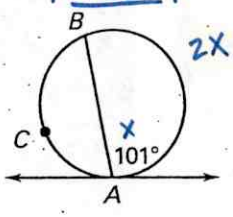
LESSON 10.5

Practice

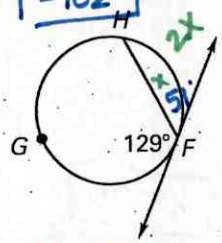
For use with pages 680–686

Find the indicated arc measure.

1. $m\overset{\frown}{AB}$ = 2(101) = 202°

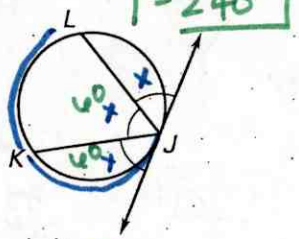


2. $m\overset{\frown}{FH}$ = 2(51) = 102°



180 − 129 = 51

3. $m\overset{\frown}{JKL}$ = 2(120) = 240°

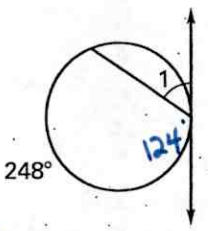


3X = 180

X = 60

Find $m\angle 1$.

4.

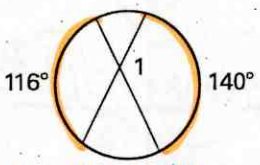


248/2 = 124

$m\angle 1 = 180 - 124$

$m\angle 1 = 56°$

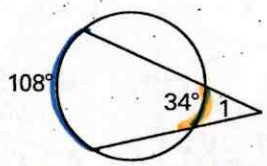
5.



$m\angle 1 = \frac{116 + 140}{2}$

$m\angle 1 = 128°$

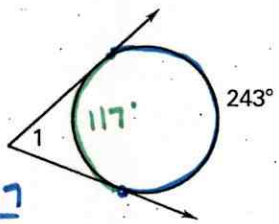
6.



$m\angle 1 = \frac{108 - 34}{2}$

$m\angle 1 = 37°$

7.

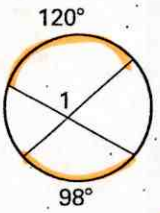


Small Arc 360 − 243

$m\angle 1 = \frac{243 - 117}{2}$

$m\angle 1 = 63°$

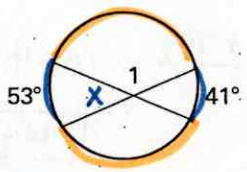
8.



$m\angle 1 = \frac{120 + 98}{2}$

$m\angle 1 = 109$

9.



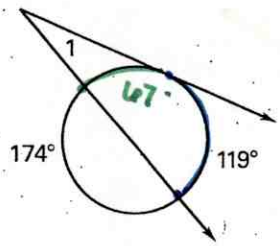
$X = \frac{53 + 41}{2}$

$X = 47$

$m\angle 1 = 180 - 47$

$m\angle 1 = 133°$

10.

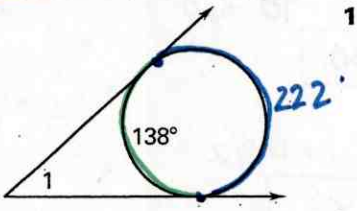


Small Arc 360 − (174 + 119)

$m\angle 1 = \frac{119 - 67}{2}$

$m\angle 1 = 26°$

11.



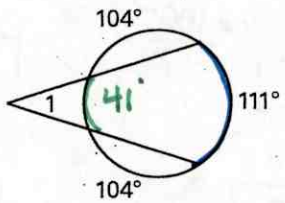
Big Arc = 360 − 138

$m\angle 1 = \frac{222 - 138}{2}$

OR $m\angle 1 = 180 - 138$

$= 42°$

12.



Small Arc = 360 − (104 + 111 + 104)

$m\angle 1 = \frac{111 - 41}{2}$

$m\angle 1 = 35°$

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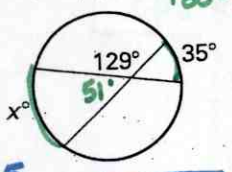
LESSON 10.5 **Practice** *continued*
For use with pages 680–686

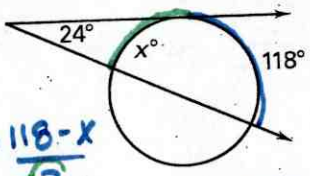
In Exercises 13–18, find the value of x.

13.



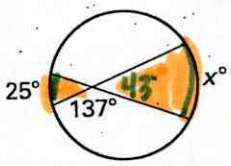
180-129
51 = x + 35
102 = x + 35
x = 67

14.



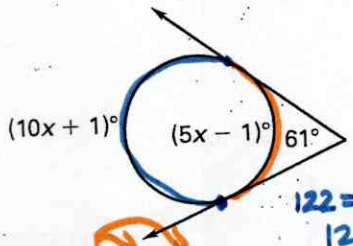
24 = 118 - x
48 = 118 - x
-118 -118
-70 = -x
x = 70

15.



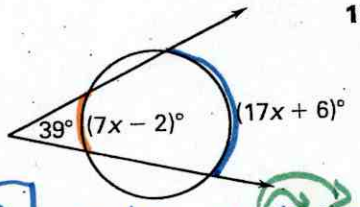
180 - 137
43 = x + 25
86 = x + 25
x = 61

16.



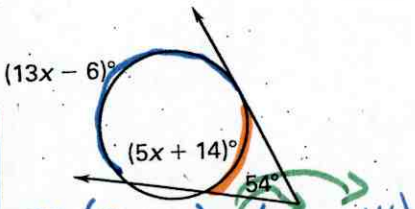
61 = (10x + 1) = (5x - 1)
122 = 10x + 1 - 5x + 1
122 = 5x + 2
120 = 5x
x = 24

17.



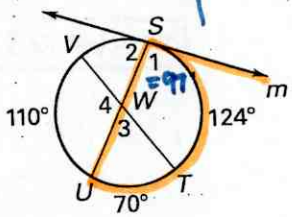
39 = (17x + 6) = (7x - 2)
78 = 17x + 6 - 7x + 2
78 = 10x + 8
70 = 10x
x = 7

18.



54 = (13x - 6) = (5x + 14)
108 = 13x - 6 - 5x + 14
108 = 8x - 20
128 = 8x
x = 16

19. In the diagram shown, m is tangent to the circle at the point S. Find the measures of all the numbered angles.



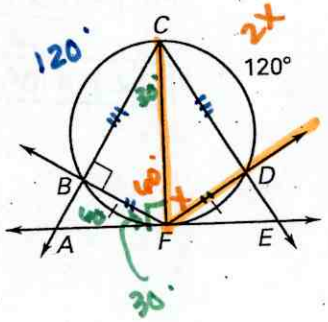
m∠1 = (124 + 70) / 2
m∠1 = 97°

m∠4 = 110 + 124 / 2
m∠4 = 117

m∠2 = 180 - 97 LP
m∠2 = 83°

m∠3 = 180 - 117 LP
m∠3 = 63

Use the diagram shown to find the measure of the angle.



20. $m\angle CAF$ = 180 - 60 / 2
= 60°

21. $m\angle AFB$ 90 - 60
= 30

22. $m\angle CEF$
60

23. $m\angle CFB$ = 120/2
= 60°

24. $m\angle DCF$
30

25. $m\angle BCD$ = 2(30)
= 60°