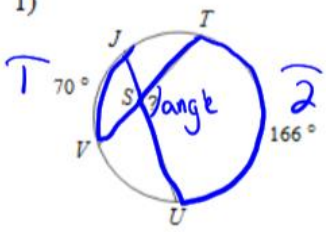
Geometry Name_____

Chord - Chord Angles

Date_____ Period____

Find the measure of the arc or angle indicated. Assume that lines which appear tangent are tangent.

1)



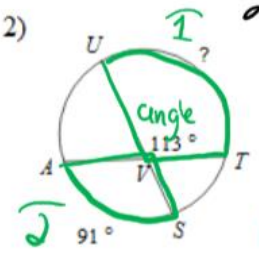
$2(\angle) = \overset{\frown}{T} + \overset{\frown}{2}$

$2(?) = 70 + 166$

$2(?) = 136$

$? = 68°$

2)



$2(\angle) = \overset{\frown}{1} + \overset{\frown}{2}$

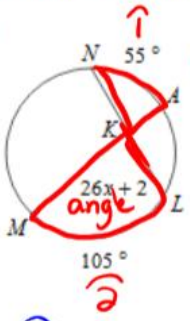
$2(113) = ? + 91$

$226 = ? + 91$

$135° = ?$

Solve for x. Assume that lines which appear tangent are tangent.

3)



$2(\angle) = \overset{\frown}{1} + \overset{\frown}{2}$

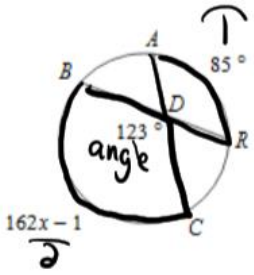
$2(26x+2) = 55 + 105$

$52x + 4 = 160$

$52x = 156$

$x = 3$

4)



$2(\angle) = \overset{\frown}{T} + \overset{\frown}{2}$

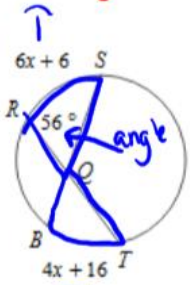
$2(123) = 85 + 162x - 1$

$246 = 84 + 162x$

$162 = 162x$

$1 = x$

5)



$2(\angle) = \overset{\frown}{T} + \overset{\frown}{2}$

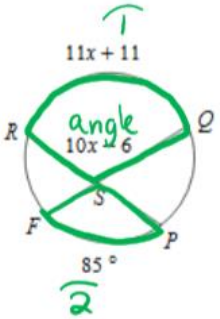
$2(56) = 6x + 6 + 4x + 16$

$112 = 10x + 32$

$80 = 10x$

$8 = x$

6)



$2(\angle) = \overset{\frown}{T} + \overset{\frown}{2}$

$2(10x - 6) = 11x + 11 + 85$

$20x - 12 = 11x + 96$

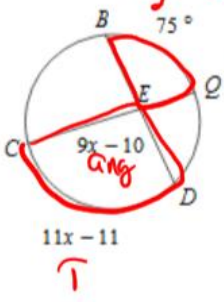
$9x - 12 = 96$

$9x = 108$

$x = 12$

Find the measure of the arc or angle indicated. Assume that lines which appear tangent are tangent.

7) Find $m\angle DEC$



$2(\angle) = \overset{\frown}{T} + \overset{\frown}{2}$

$2(9x - 10) = 11x - 11 + 75$

$18x - 20 = 11x + 64$

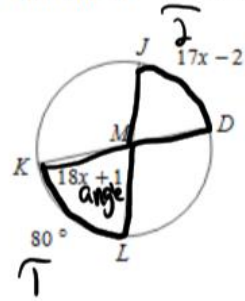
$7x - 20 = 64$

$7x = 84$

$x = 12$

$m\angle DEC = 9(12) - 10 = 98°$

8) Find $m\overset{\frown}{JD}$



$2(\angle) = \overset{\frown}{T} + \overset{\frown}{2}$

$2(18x + 1) = 80 + 17x - 2$

$36x + 2 = 78 + 17x$

$19x + 2 = 78$

$19x = 76$

$x = 4$

$m\overset{\frown}{JD} = 17(4) - 2 = 66°$

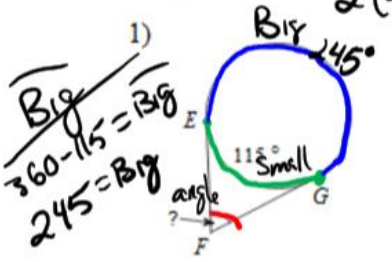
Geometry Name_____

Secants and Tangent

Date_____ Period____

Find the measure of the arc or angle indicated. Assume that lines which appear tangent are tangent.

1)



Big − Small = Big
360 − 115 = 245
245 = Big

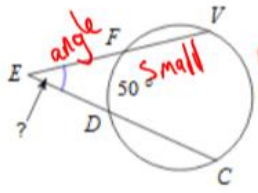
2(∠) = Big − Small
2(?) = 245 − 115
2(?) = 130
? = 65°

2)

angle
small
Big

2(∠) = Big − Small
2(?) = 179 − 59
2(?) = 120
? = 60°

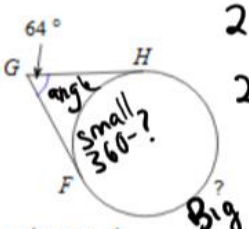
3)



angle
small
Big

2(∠) = Big − Small
2(?) = 126 − 50
2(?) = 76
? = 38°

4)

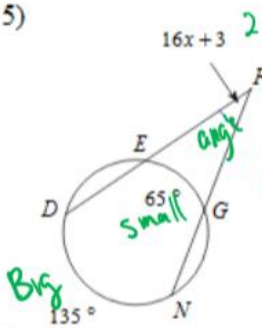


angle
small
360 − ?
Big

2(∠) = Big − Small
2(64) = ? − (360 − ?)
128 = ? − 360 + ?
128 = 2(?) − 360
428 = 2?
214 = ?

Solve for x. Assume that lines which appear tangent are tangent.

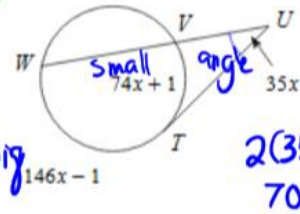
5)



angle
small
Big

2(∠) = Big − Small
2(16x + 3) = 135 − 65
32x + 6 = 70
32x = 64
x = 2

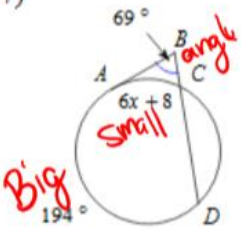
6)



angle
Big

2(∠) = Big − Small
2(35x) = 146x − 1 − (74x + 1)
70x = 146x − 1 − 74x − 1
70x = 72x − 2
−2x = −2
x = 1

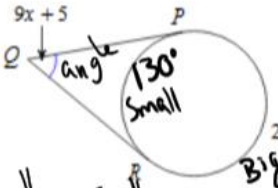
7)



angle
small
Big

2(∠) = Big − Small
2(69) = 194 − (6x + 8)
138 = 194 − 6x − 8
138 = 186 − 6x
−48 = −6x
8 = x

8)



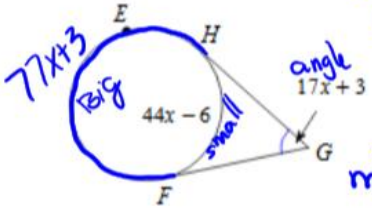
angle
small
Big

small + small = 360
360 − 230 = small
130 = small

2(∠) = Big − Small
2(9x + 5) = 230 − 130
18x + 10 = 100
18x = 90
x = 5

Find the measure of the arc or angle indicated. Assume that lines which appear tangent are tangent.

9) $m\overset{\frown}{HEF} = 77x + 3$
Find $m\overset{\frown}{HEF}$

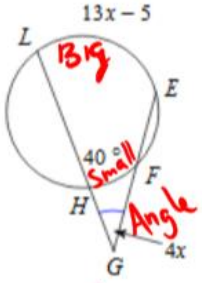


angle

2(∠) = Big − Small
2(17x + 3) = 77x + 3 − (44x − 6)
34x + 6 = 77x + 3 − 44x + 6
34x + 6 = 33x + 9
x + 6 = 9
x = 3

$m\overset{\frown}{HEF}$ = 77(3) + 3
= 234°

10) Find $m\overset{\frown}{LE}$



2(∠) = Big − Small
2(4x) = 13x − 5 − 40
8x = 13x − 45
−5x = −45
x = 9

$m\overset{\frown}{LE}$ = 13(9) − 5
$m\overset{\frown}{LE}$ = 112°