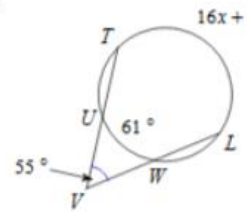
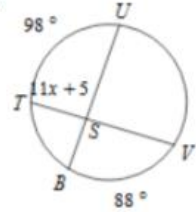
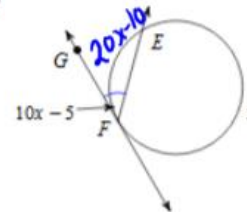


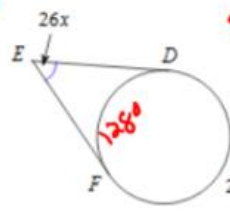
Circle Properties Review

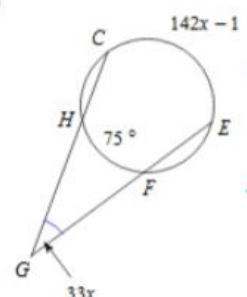
Solve for x. Assume that lines which appear tangent are tangent.

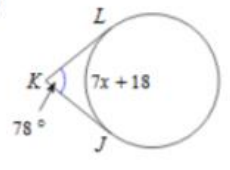
1)  $2(55) = 16x + 11 - 61$
 $110 = 16x - 50$
 $160 = 16x$
 $x = 10$

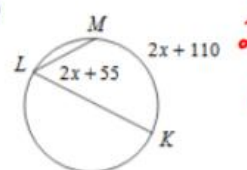
2)  $2(11x+5) = 98 + 88$
 $22x + 10 = 186$
 $22x = 176$
 $x = 8$

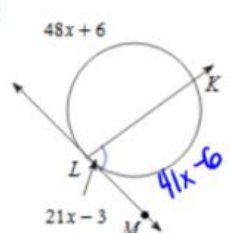
3)  $2(10x-5) = 20x - 10$
 $20x - 10 + 54x = 360$
 $74x - 10 = 360$
 $74x = 370$
 $x = 5$

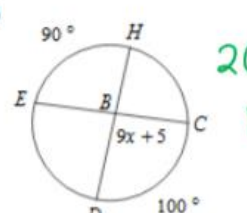
4)  $Small\ Arc = 360 - 232 = 128$
 $2(26x) = 232 - 128$
 $52x = 104$
 $x = 2$

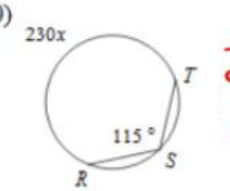
5)  $2(33x) = 142x - 1 - 75$
 $66x = 142x - 76$
 $-76x = -76$
 $x = 1$

6)  $Special\ property\ of\ tangent -\ tangent$
 $180 - small = angle$
 $180 - (7x+18) = 78$
 $162 - 7x = 78$
 $-7x = -84$
 $x = 12$

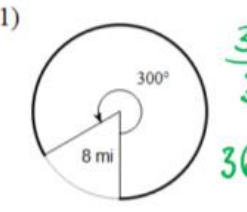
7)  $2(2x+55) = 2x+110$
 $4x+110 = 2x+110$
 $2x = 0$
 $x = 0$

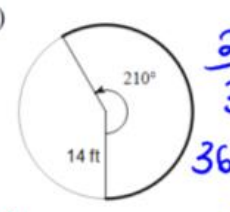
8)  $2(21x-3) = 42x-6$
 $42x-6 + 48x+6 = 360$
 $90x = 360$
 $x = 4$

9)  $2(9x+5) = 100 + 90$
 $18x+10 = 190$
 $18x = 180$
 $x = 10$

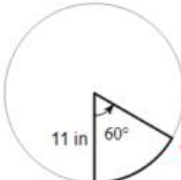
10)  $2(115) = 230x$
 $230 = 230x$
 $x = 1$

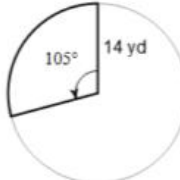
Find the length of each arc.

11)  $\frac{300}{360} \times \frac{5}{2\pi(8)}$
 $360s = 4800\pi$
 $s = \frac{40\pi}{3} mi \approx 41.888mi$

12)  $\frac{210}{360} = \frac{s}{2\pi(14)}$
 $360s = 5880\pi$
 $s = \frac{49\pi}{3} ft \approx 51.313 ft$

Find the area of each sector.

13)  $\frac{60}{360} = \frac{A}{\pi(11)^2}$
 $360A = 7260\pi$
 $A = \frac{121\pi}{6} \text{ in}^2 = 63.355 \text{ in}^2$

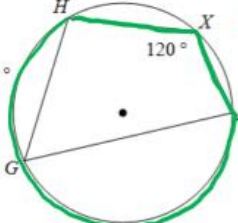
14)  $\frac{105}{360} = \frac{A}{\pi(14)^2}$
 $360A = 20,580\pi$
 $A = \frac{343\pi}{6} \text{ yd}^2 = 179.594 \text{ yd}^2$

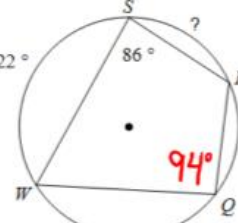
A central angle of 270° forms an arc that is 18 in. long. What is the radius of the circle?
 $\frac{270}{360} = \frac{18}{2\pi r}$ $540\pi r = 6480$
 $r = 3.820 \text{ in}$

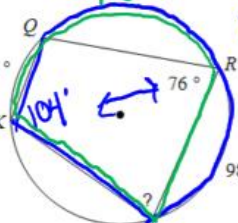
The area of a sector is $54\pi \text{ ft}^2$. The radius of the circle is 9 ft. Find the measure of the central angle that created the sector.

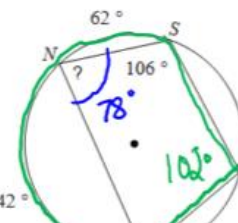
$\frac{\theta}{360} \times \frac{54\pi}{81\pi}$ $81\theta = 19,440$
 $\theta = 240^\circ$

Find the measure of the arc or angle indicated.

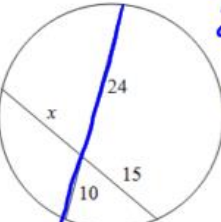
15)  $2(120) = 86 + ?$
 $240 = 86 + ?$
 $154 = ?$

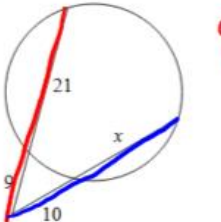
16)  $m\angle Q = 180 - 86 = 94$
 $2(94) = 122 + ?$
 $188 = 122 + ?$
 $66 = ?$

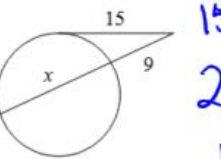
17)  208
 $208 - 98 = 110$
 $2(?) = 110 + 48$

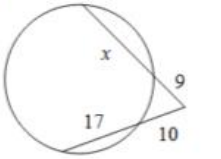
18)  $2(m\angle L) = 142 + 62$
 $2(m\angle L) = 204$
 $m\angle L = 102$
 $? = 180 - 102 = 78^\circ$

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

19)  $24(10) = 15(x)$
 $240 = 15x$
 $x = 16$

20)  $9(21+9) = 10(10+x)$
 $270 = 100 + 10x$
 $170 = 10x$
 $x = 17$

21)  $15(15) = 9(9+x)$
 $225 = 81 + 9x$
 $144 = 9x$
 $x = 16$

22)  $9(9+x) = 10(10+17)$
 $81 + 9x = 270$
 $9x = 189$
 $x = 21$