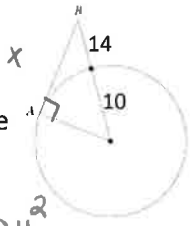
Honors Geometry Unit 10 Review Sheet **Name:** _____

Multiple Choice: Circle your final answer.

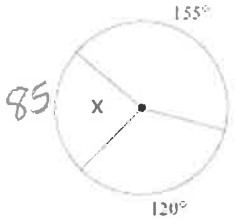
1. Assuming $\overline{AB}$ is tangent to the circle. Determine the value of AB.



   a. 10.3
   b. 21.8
   c. 26.5
   d. 59.9

$10^2 + x^2 = 24^2$
$100 + x^2 = 576$
$x^2 = 476$
$x = 21.8$

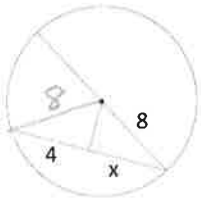
2. Find the value of x.



   a. 75°
   b. 85°
   c. 150°
   d. 170°

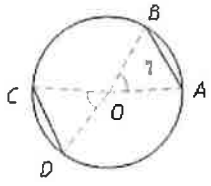
$155 + 120 = 275$ $360 - 275 = 85$

3. Find the value of x.



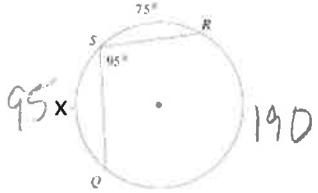
   a. $4\sqrt{3}$
   b. $8\sqrt{3}$
   c. 4
   d. 16

4. Given AB = 7, find CD.



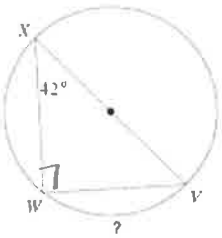
   a. 7
   b. 14
   c. 60
   d. 45

5. Find the value of x.



   a. 75°
   b. 85°
   c. 95°
   d. 100°

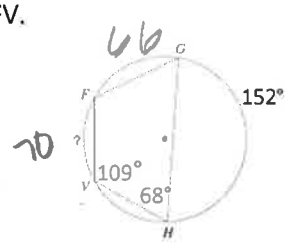
6. Find the measure of arc WV.



   a. 46°
   b. 84°
   c. 96°
   d. 24°

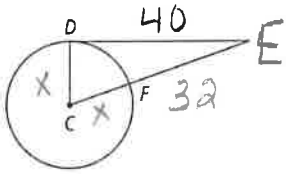
84

7. Find the measure of arc FV.



   a. 70°
   b. 66°
   c. 132°
   d. 28°

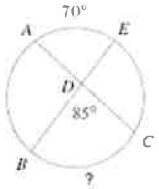
8. If DE = 40 and FE = 32, find the radius.



   a. 10
   b. 5.2
   c. 9
   d. 9.5

$x^2 + 40^2 = (x+32)^2$
$x^2 + 1600 = x^2 + 64x + 1024$
$576 = 64x$
$x = 9$

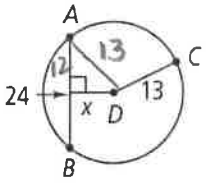
9. Find the measure of arc BC.



   a. 70°
   b. 85°
   c. 100°
   d. 170°

$85 = \frac{1}{2}(70 + ?)$
$170 = 70 + ?$
$100 =$

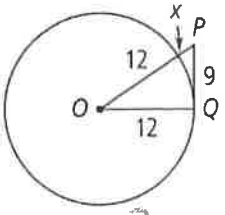
10. Find the value of x.



   a. 5
   b. 6
   c. 9
   d. 10

$12^2 + x^2 = 13^2$
$x^2 = 25$
$x = \pm 5$

11. Find the value of x.



   a. 2
   b. 8
   c. 3
   d. 10

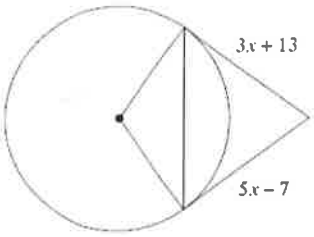
$12^2 + 9^2 = (x+12)^2$
$144 + 81 = (x+12)^2$
$\sqrt{225} = \sqrt{(x+12)^2}$
$\pm 15 = x + 12$

$x + 12 = 15$
$x = 3$

$x + 12 = -15$
$x = -27$

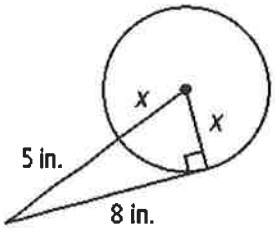
Short Answer: Show all your work.

12. Solve for x.



$3x+13=5x-7$
$20=2x$
$10=x$

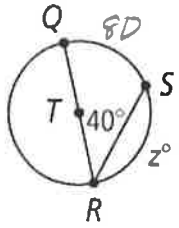
13. Solve for x.



$x^2+64=(x+5)^2$
$x^2+64=x^2+10x+25$
$39=10x$
$3.9=x$

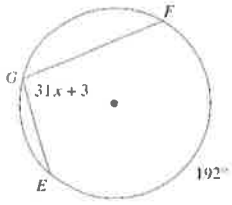
564
-525
39

14. Find the value of z.



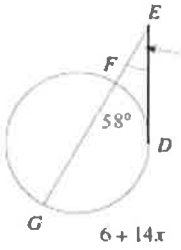
180
-80
100°

15. Find the value of x.



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

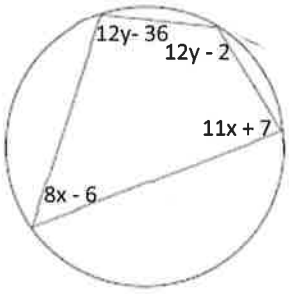
16. Solve for x.



$2x+14=\frac{1}{2}(6+14x-58$
$2x+14=\frac{1}{2}(14x-52)$
$2x+14=7x-26$
$40=5x$
$8=x$

$8x-6+12y-2=180$
$8x+12y=188$

17. Solve for x and y.



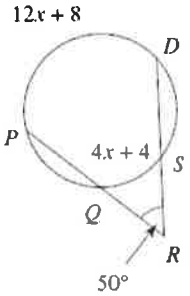
$12y-36+11x+7=180$
$11x+12y-29=180$
$11x+12y=209$

$8x+12y=188$
$-11x-12y=-209$
$-3x=-21$
$x=7$

Find y

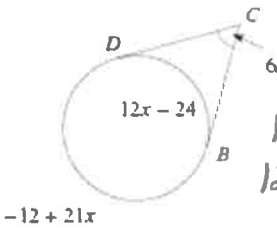
$8(7)+12y=88$
$56+12y=88$
$12y=32$
$y=\frac{8}{3}$

18. Find the value of x.



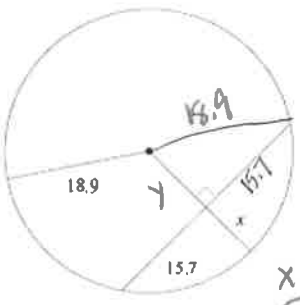
$50=\frac{1}{2}[(12x+8)-(4x+4)]$
$100=12x+8-4x-4$
$100=8x+4$
$96=8x$
$12=x$

19. Find the value of x.



$6x-12=\frac{1}{2}[(21x-12)-(12x-24$
$12x-24=21x-12-12x+24$
$12x-24=9x+12$
$3x=36$
$x=12$

20. Find the value of x.



$18.9^2=y^2+15.7^2$
$357.21=y^2+246.49$
$110.72=y^2$
$10.52=y$
$x+10.52=18.9$
$x=8.38$

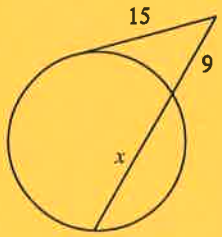
Kuta Software - Infinite Geometry Name_____

Segment Lengths in Circles

Date_____ Period____

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

1)



16

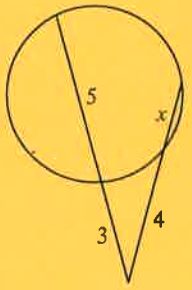
$15^2 = 9(x+9)$

$225 = 9x + 81$

$144 = 9x$

$16 = x$

2)



2

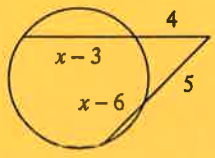
$3(8) = 4(x+4)$

$24 = 4x + 16$

$8 = 4x$

$2 = x$

3)



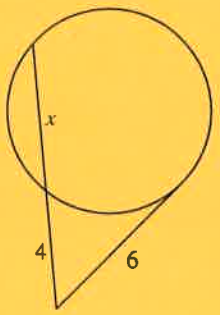
9

$4(x+1) = 5(x-1)$

$4x + 4 = 5x - 5$

$9 = x$

4)



5

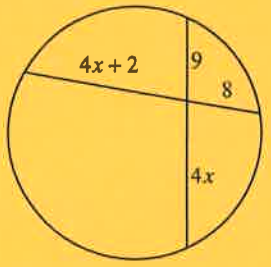
$6^2 = 4(x+4)$

$36 = 4x + 16$

$20 = 4x$

$x = 5$

5)



4

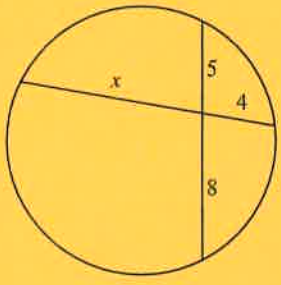
$36x = 8(4x+2)$

$36x = 32x + 16$

$4x = 16$

$x = 4$

6)

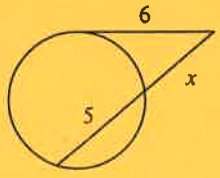


10

$4x = 40$

$x = 10$

7)



4

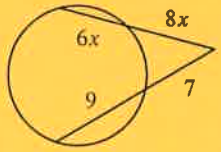
$6^2 = x(x+5)$

$x^2 + 5x - 36$

$x+9 \quad x-4$

~~$x = -9$~~ $x = 4$

8)



1

$8x(14x) = 7(16)$

$112x^2 = 112$

$x^2 = 1$

$x = \pm 1$

$x = 1$