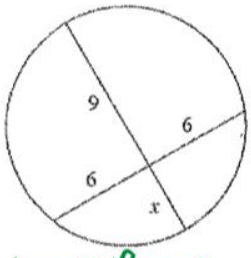
Geometry Name _____

Review for Segments In Circles

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

1)

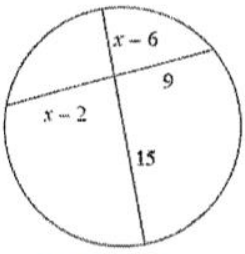


$9(x) = 6(6)$

$9x = 36$

$x = 4$

2)



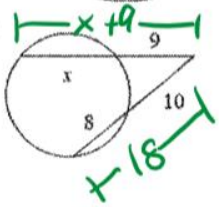
$15(x-6) = 9(x-2)$

$15x - 80 = 9x - 18$

$6x = 72$

$x = 12$

3)



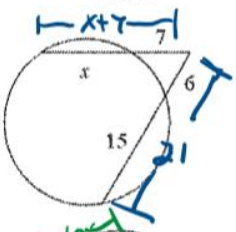
$9(x+9) = 10(18)$

$9x + 81 = 180$

$9x = 99$

$x = 11$

4)



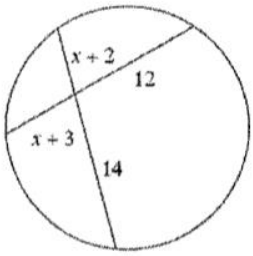
$7(x+7) = 6(21)$

$7x + 49 = 126$

$7x = 77$

$x = 11$

5)



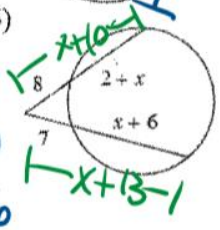
$14(x+2) = 12(x+3)$

$14x + 28 = 12x + 36$

$2x = 8$

$x = 4$

6)

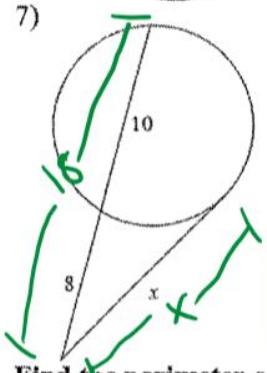


$8(x+10) = 7(x+13)$

$8x + 80 = 7x + 91$

$x = 11$

7)

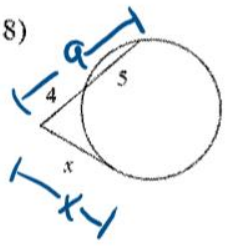


$x^2 = 8(18)$

$x^2 = 144$

$x = 12$

8)



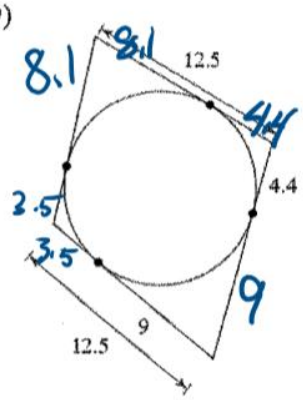
$x^2 = 4(9)$

$x^2 = 36$

$x = 6$

Find the perimeter of each polygon. Assume that lines which appear to be tangent are tangent.

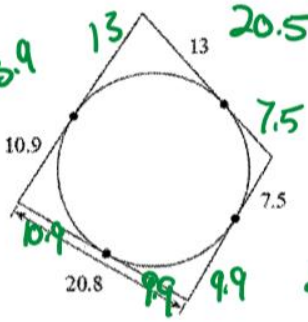
9)



11.6 13.4

12
12.5
13.4
12.5
11.6
50.0

10)

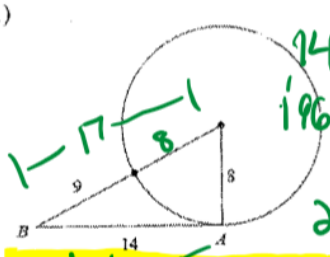


23.9 20.5 27.4

12
20.5
27.4
20.8
23.9
92.6

Determine if line AB is tangent to the circle.

11)



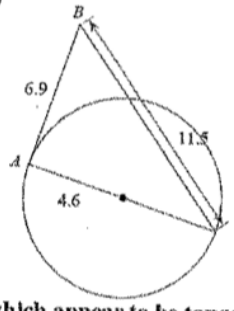
$14^2+8^2=17^2$

$196+64=289$

$260 \neq 289$

Not Tangent

12)



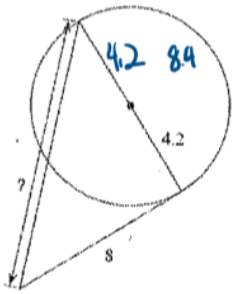
$6.9^2+9.2^2=11.5^2$

$132.25=132.25$

Tangent

Find the segment length indicated. Assume that lines which appear to be tangent are tangent.

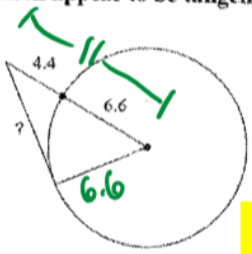
13)



$8.4^2+8^2=?^2$

$?=11.6$

14)

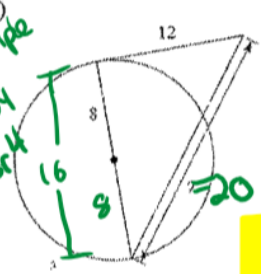


$?^2+6.6^2=11^2$

$?^2+43.56^2=121$

$?=8.8$

15)



Also Pyth. triple 3-4-5 by scale factor 4

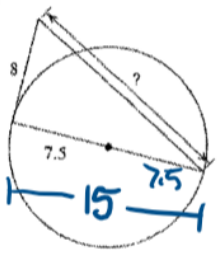
$16^2+12^2=?^2$

$256+144=?^2$

$400=?^2$

$20=?$

16)



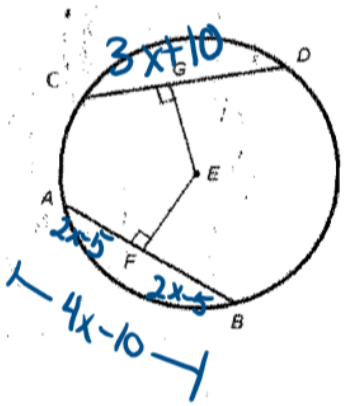
$8^2+15^2=x^2$

$64+225=x^2$

$289=x^2$

$17=x$

17. If $EG \cong EF$, $CD = 3x + 10$, and $AF = 2x - 5$, what is the length of AB?



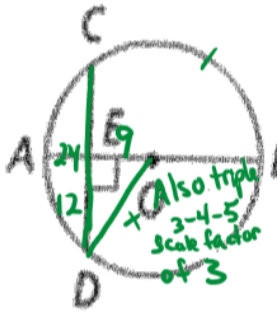
$3x+10=4x-10$

$20=x$

$AB=4(20)-10$

$AB=70$

18. If $\widehat{CB} \cong \widehat{DB}$, $m\overline{DC} = 24$, and $m\overline{OE} = 9$, What is the $m\overline{OB}$?



$9^2+12^2=x^2$

$81+144=x^2$

$225=x^2$

$15=x$

$\overline{OB}=15$