GSE Geometry Name_____

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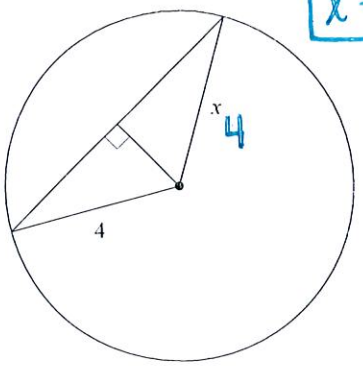
Day 1 Practice - Chord Properties and Segment Lengths

Date_____

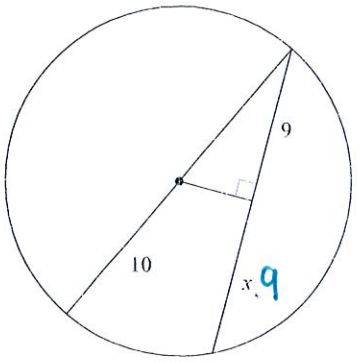
Find the length of the segment indicated. Round your answer to the nearest tenth if necessary.

1)



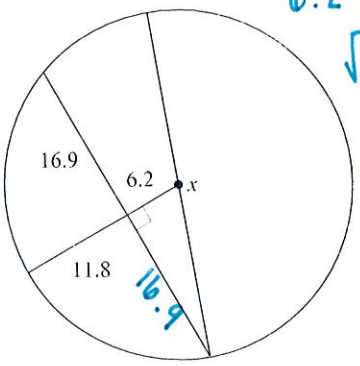
$x = 4$

2)



$x = 9$

3)



$6.2^2 + 16.9^2 = c^2$

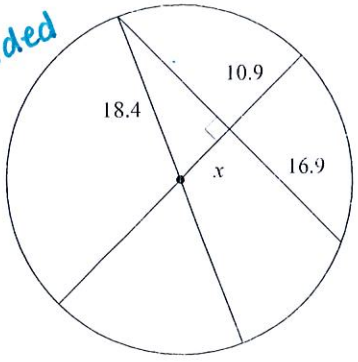
$\sqrt{c^2} = \sqrt{324.05}$

$c = 18.00$ ← rounded

$18 \times 2 = 36$

$x = 36$

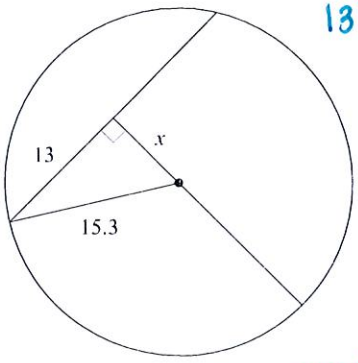
4)



$18.4 - 10.9 = 7.5$

$x = 7.5$

5)

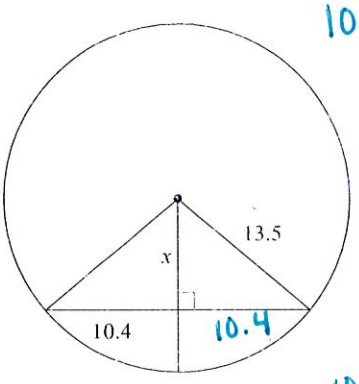


$13^2 + x^2 = 15.3^2$

$\sqrt{x^2} = \sqrt{65.09}$

$x = 8.1$

6)

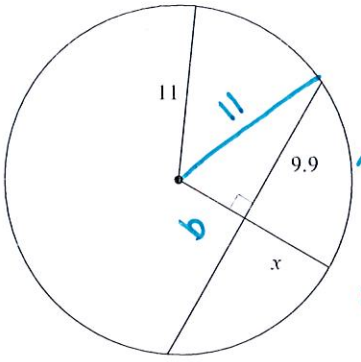


$10.4^2 + x^2 = 13.5^2$

$\sqrt{x^2} = \sqrt{74.09}$

$x = 8.6$

7)



$9.9^2 + b^2 = 11^2$

$b^2 = 22.99$

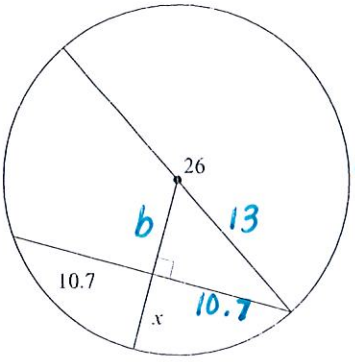
$b = 4.8$

$x = 11 - b$

$x = 11 - 4.8$

$x = 6.2$

8)



$10.7^2 + b^2 = 13^2$

$\sqrt{b^2} = \sqrt{54.51}$

$b = 7.4$

$x = 13 - b$

$x = 13 - 7.4$

$x = 5.6$

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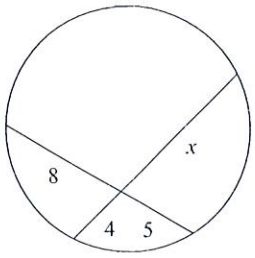
Solve for x. Assume that lines which appear tangent are tangent.

9)

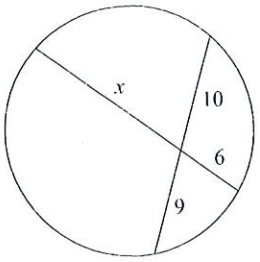


$4 \cdot x = 8 \cdot 5$

$4x = 40$

$\boxed{x = 10}$

10)

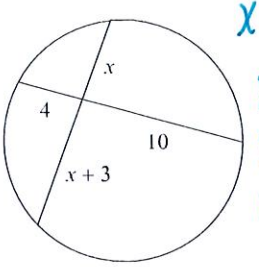


$6 \cdot x = 9 \cdot 10$

$6x = 90$

$\boxed{x = 15}$

11)



$x(x+3) = 4 \cdot 10$

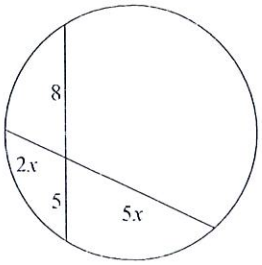
$x^2 + 3x = 40$

$x^2 + 3x - 40 = 0$

$(x+8)(x-5) = 0$

~~$x = -8$~~ & $\boxed{x = 5}$

12)



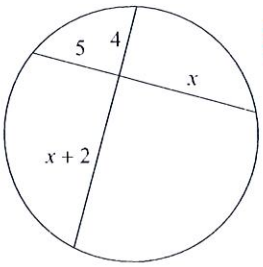
$2x \cdot 5x = 8 \cdot 5$

$10x^2 = 40$

$x^2 = 4$

$\boxed{x = 2}$

13)

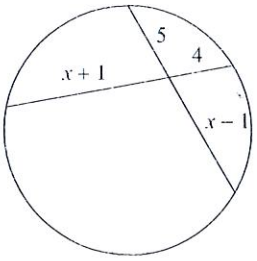


$5 \cdot x = 4(x+2)$

$5x = 4x + 8$

$\boxed{x = 8}$

14)



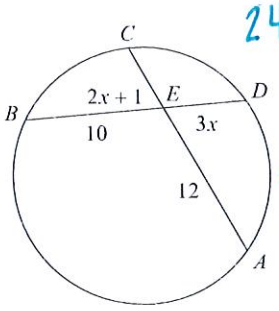
$5(x-1) = 4(x+1)$

$5x - 5 = 4x + 4$

$\boxed{x = 9}$

Find the measure of the line segment indicated. Assume that lines which appear tangent are tangent.

15) Find ED



$12(2x+1) = 3x \cdot 10$

$24x + 12 = 30x$

$12 = 6x$

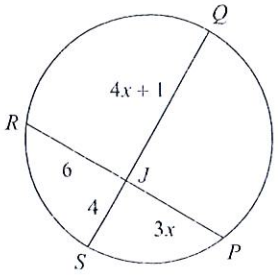
$x = 2$

$ED = 3x$

$ED = 3(2)$

$\boxed{ED = 6}$

16) Find RP



$3x \cdot 6 = 4(4x+1)$

$18x = 16x + 4$

$2x = 4$

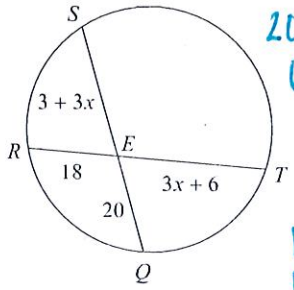
$x = 2$

$RP = 3x + 6$

$RP = 3(2) + 6$

$\boxed{RP = 12}$

17) Find RT



$20(3+3x) = 18(3x+6)$

$60 + 60x = 54x + 108$

$6x = 48$

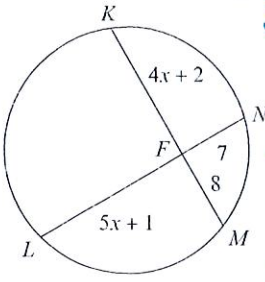
$x = 8$

$RT = 3x + 6 + 18$

$RT = 3(8) + 6 + 18$

$\boxed{RT = 48}$

18) Find MK



$8(4x+2) = 7(5x+1)$

$32x + 16 = 35x + 7$

$9 = 3x$

$x = 3$

$MK = 4x + 2 + 8$

$MK = 4(3) + 2 + 8$

$\boxed{MK = 22}$

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