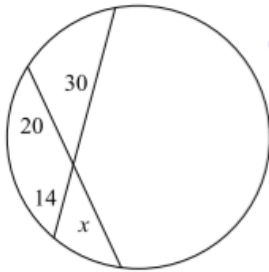


Segments: Chord-Chord

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

1)

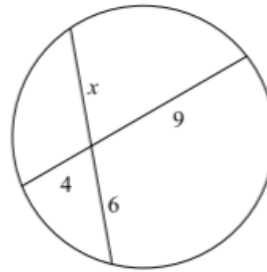


$$20x = 30(14)$$

$$20x = 420$$

$$x = 21$$

2)

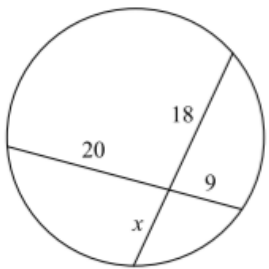


$$6x = 9(4)$$

$$6x = 36$$

$$x = 6$$

3)

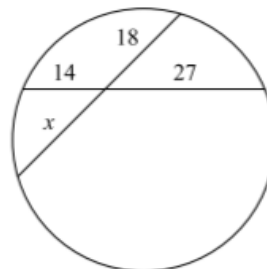


$$18x = 9(20)$$

$$18x = 180$$

$$x = 10$$

4)

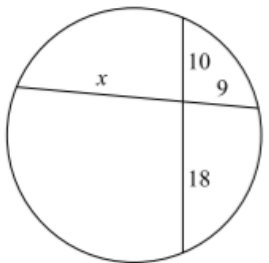


$$18x = 14(27)$$

$$18x = 378$$

$$x = 21$$

5)

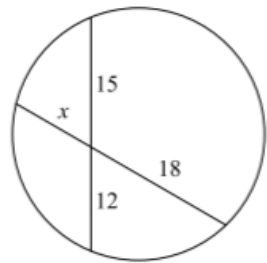


$$9x = 10(18)$$

$$9x = 180$$

$$x = 20$$

6)

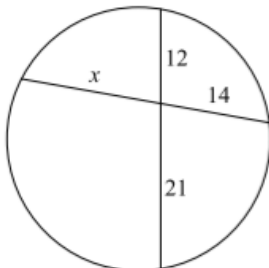


$$18x = 12(15)$$

$$18x = 180$$

$$x = 10$$

7)

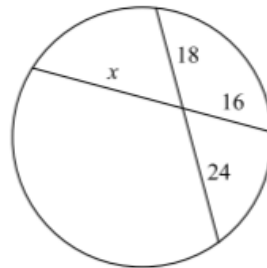


$$14x = 21(12)$$

$$14x = 252$$

$$x = 18$$

8)

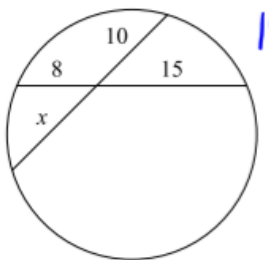


$$16x = 18(24)$$

$$16x = 432$$

$$x = 27$$

9)

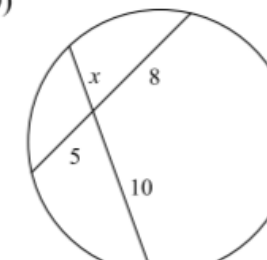


$$10x = 8(15)$$

$$10x = 120$$

$$x = 12$$

10)



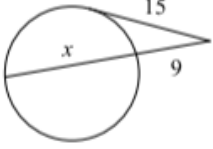
$$10x = 5(8)$$

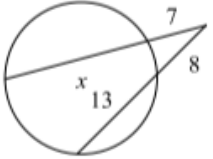
$$10x = 40$$

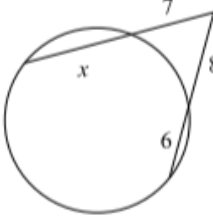
$$x = 4$$

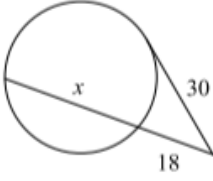
Segments: Secants and Tangents

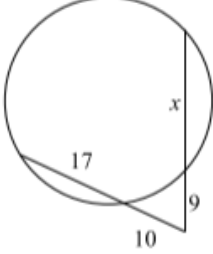
Solve for x . Assume that lines which appear tangent are tangent.

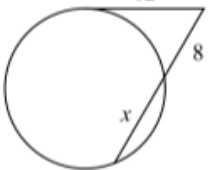
1)  $(15)^2 = 9(9+x)$
 $225 = 81 + 9x$
 $144 = 9x$
 $x = 16$

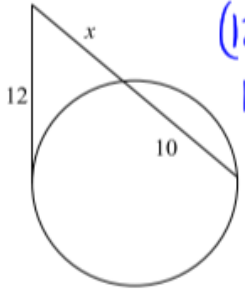
2)  $8(8+13) = 7(7+x)$
 $168 = 49 + 7x$
 $119 = 7x$
 $x = 17$

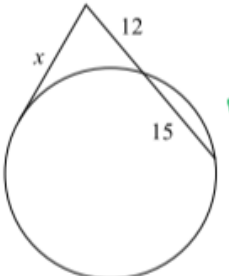
3)  $8(8+6) = 7(7+x)$
 $112 = 49 + 7x$
 $63 = 7x$
 $x = 9$

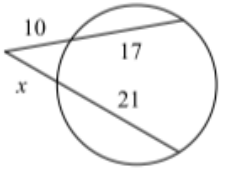
4)  $(30)^2 = 18(18+x)$
 $900 = 324 + 18x$
 $576 = 18x$
 $x = 32$

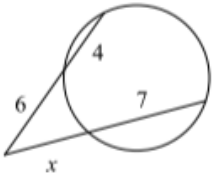
5)  $10(10+17) = 9(9+x)$
 $270 = 81 + 9x$
 $189 = 9x$
 $x = 21$

6)  $(12)^2 = 8(8+x)$
 $144 = 64 + 8x$
 $80 = 8x$
 $x = 10$

7)  $(12)^2 = x(x+10)$
 $144 = x^2 + 10x$
 $x^2 + 10x - 144 = 0$
 $(x-8)(x+18) = 0$
 $x-8=0 \quad x+18=0$
 $x=8 \quad x=-18$

8)  $x^2 = 12(12+15)$
 $\sqrt{x^2} = \sqrt{324}$
 $x = 18$

9)  $x(x+21) = 10(10+17)$
 $x^2 + 21x = 270$
 $x^2 + 21x - 270 = 0$
 $(x-9)(x+30) = 0$
 $x-9=0 \quad x+30=0$
 $x=9 \quad x=-30$

10)  $x(x+7) = 6(6+4)$
 $x^2 + 7x = 60$
 $x^2 + 7x - 60 = 0$
 $(x+12)(x-5) = 0$
 $x+12=0 \quad x-5=0$
 $x=-12 \quad x=5$