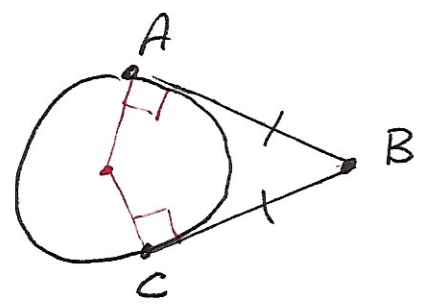


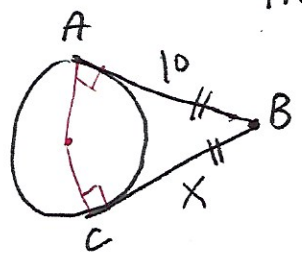
ch 10.5 Tangent-tangent thm

If two segments from the same exterior point are tangent to a circle, then they are congruent.



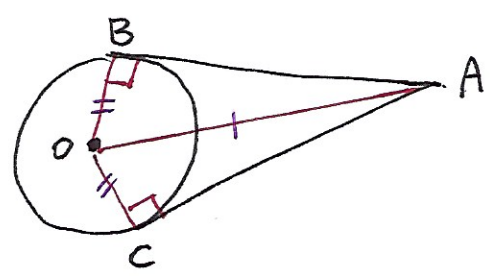
$$\overline{AB} \cong \overline{BC}$$

For example, if $\overline{AB} = 10$
then $\overline{BC} = 10$



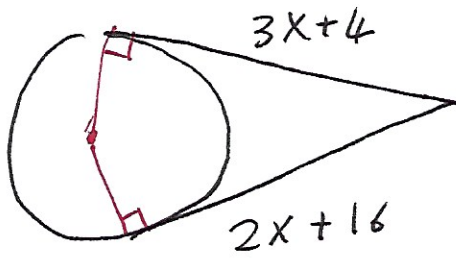
Proof

given
 \overline{AB} and \overline{AC}
are tangents
Prove
 $\overline{AB} \cong \overline{AC}$



statements	reasons
\overline{AB} and \overline{AC} are tangent to circle O	given
$\angle B$ and $\angle C$ are 90°	By definition of tangent
$\overline{OB} \cong \overline{OC}$	By definition of radius
$\overline{OA} \cong \overline{OA}$	Reflexive property
$\triangle ABO \cong \triangle ACO$	H L Thm
$\overline{AB} \cong \overline{AC}$	C P C T C

#1. Find X

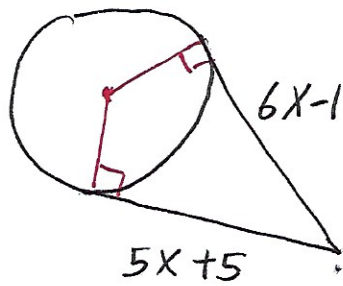


$$3X+4 = 2X+16$$

$$3X-2X = 16-4$$

$$X = \boxed{12}$$

#2. Find X



$$6X-1 = 5X+5$$

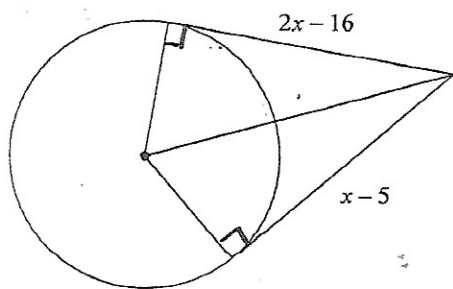
$$6X-5X = 5+1$$

$$X = \boxed{6}$$

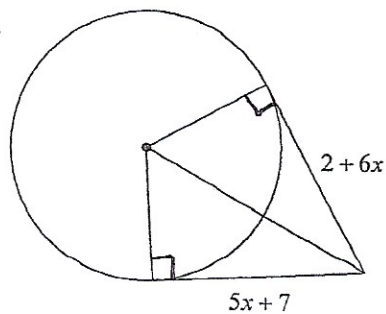
Practice Problems.

Solve for x .

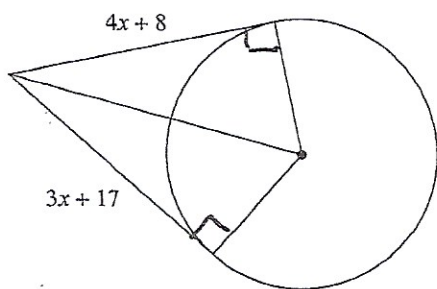
#1



#2



#3



#4

