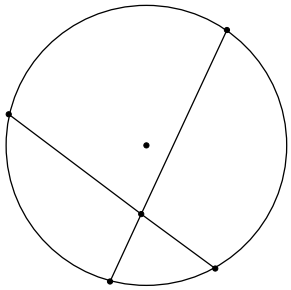
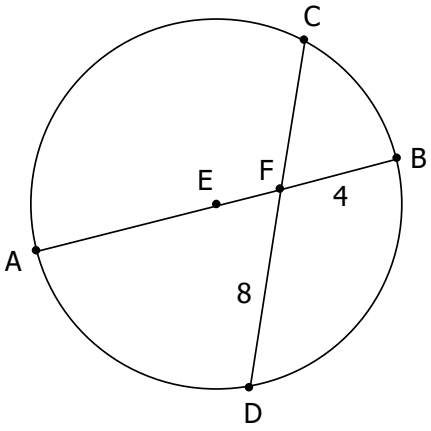
Geometry
Notes Intersecting Segments

Name: _____

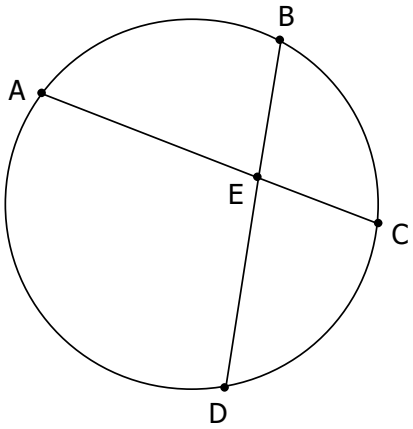
Period: _____ Date: _____

★ **Theorem: <u>Segment Lengths: Intersection INSIDE the Circle</u>**





$\overline{AB}$ is a diameter of ⊙E and has length 14.
BF = 4, and DF = 8.
Find the length of chord $\overline{CD}$

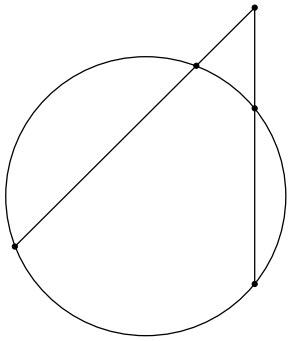


<u>Given:</u>

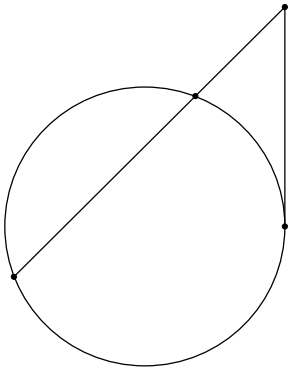
AE = $2x$ EC = 4 BE = 5 ED = $x + 3$

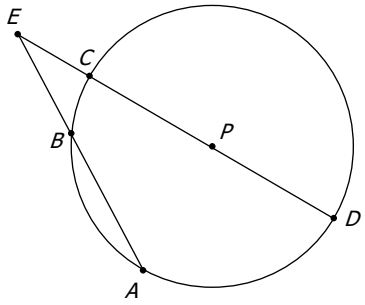
Find the value of x.

★ **Theorem: <u>Segment Lengths: Intersection OUTSIDE the Circle</u>**



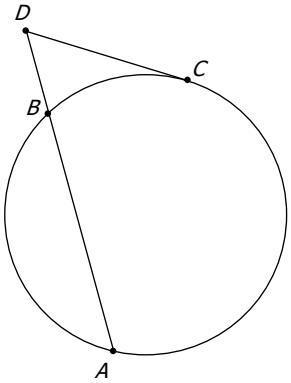
★ **Special Case: <u>Secant and Tangent: Intersection OUTSIDE the Circle</u>**





<u>Given:</u>
$CD = 16$
$EC = 5$
$EB = 7$
$AB = 4x - 12$

<u>Find:</u>
the value of x



<u>Given:</u>
$AB = 12$
$BD = 4$

<u>Find:</u>
CD