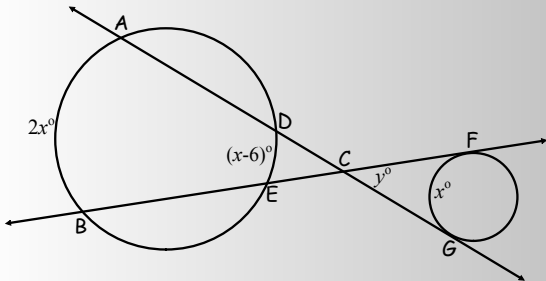


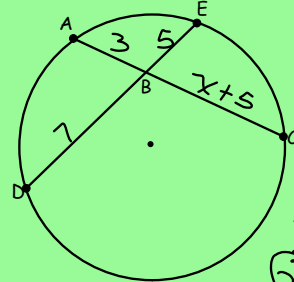
Warm-up

Find all possible arcs and angles.

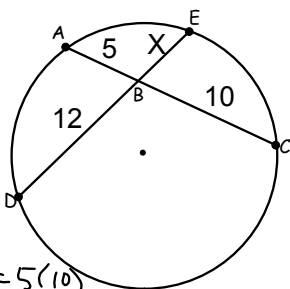


$AB(BC) = DB(BE)$

2 Chords

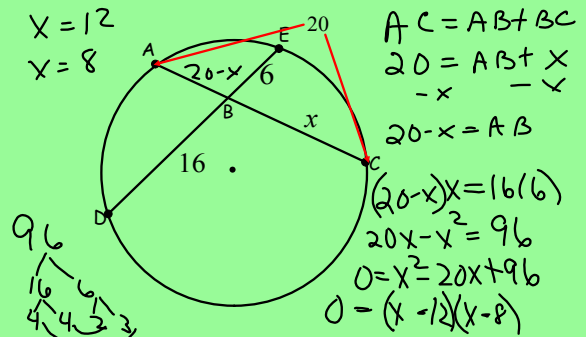


$7(5) = 3(x+5)$
 $35 = 3x + 15$
 $20 = 3x$
 $\frac{20}{3} = x$

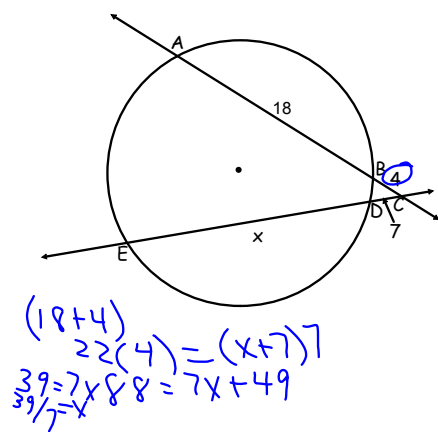
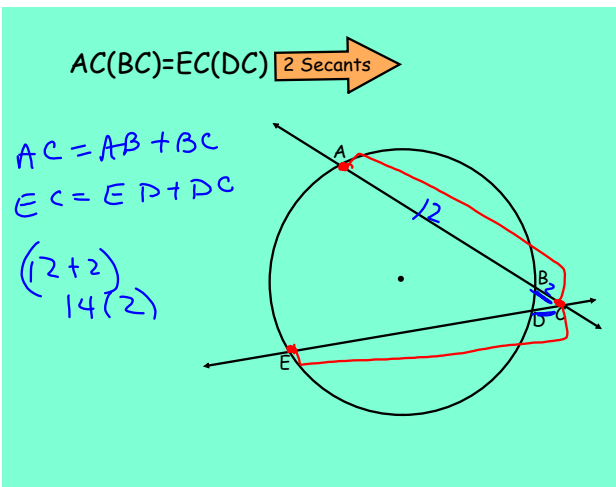
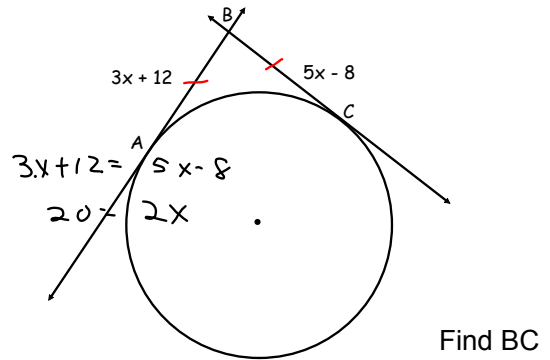
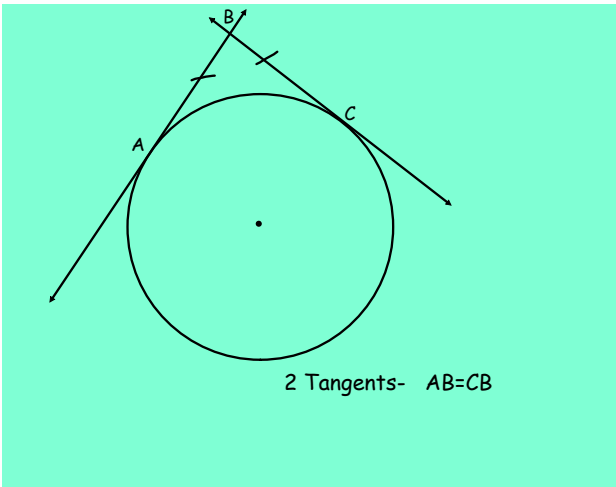


$12(x) = 5(10)$
 Find x $\frac{25}{6} = \frac{50}{12}$

Find AB



$x = 12$
 $x = 8$
 $AC = AB + BC$
 $20 = AB + x$
 $-x \quad -x$
 $20 - x = AB$
 $(20 - x)x = 16(6)$
 $20x - x^2 = 96$
 $0 = x^2 - 20x + 96$
 $0 = (x - 12)(x - 8)$
 96
 $16 \quad 6$
 $4 \quad 4 \quad 2 \quad 3$



$(x+6)x=20(2)$ Find AC

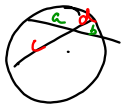
AC
 $(6+x)x=(18+2)2$
 $6x+x^2=20(2)$
 $x^2+6x=40$
 $x^2+6x-40=0$
 $(x+10)(x-4)=0$ $x=\cancel{-10}$
 $x=4$

$BC(AC)=CD^2$ A Secant and a Tangent

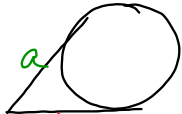
$(12+4)4=x^2$
 $16(4)=x^2$
 $64=x^2$
 $x=8$

Find x

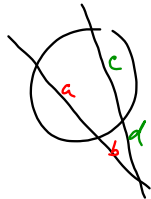
$(18+x)x=12^2$
 $18x+x^2=144$
 $x^2+18x-144=0$ $x=6$
 $(x-6)(x+24)=0$ $x=-24$



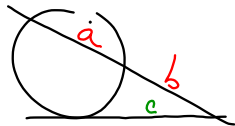
2 chords
 $a \cdot b = c \cdot d$



2 tangents
 $a = b$



2 secants
 $(a+b)b = (c+d)d$



secant & tangent
 $(a+b) \cdot b = c^2$



$$(13+x)x = (12+4) \cdot 4$$

$$x^2 + 13x = 16(4) = 64$$