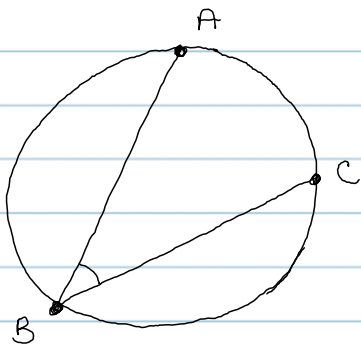


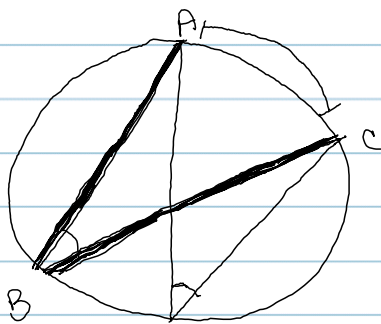
Geometry B3



$m \widehat{AC} = 94$

$m \angle ABC = 47$

The measure of the arc is 2 times the measure of the angle.



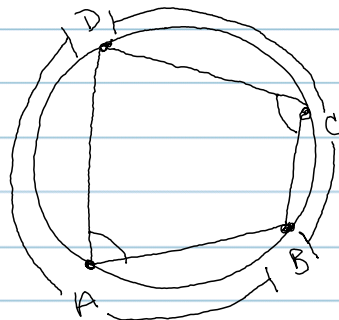
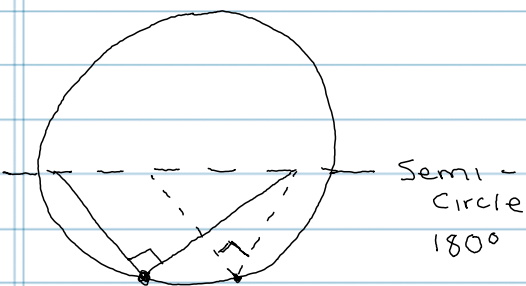
$m \widehat{AC} = 94$

$m \angle ABC = 47$

$m \angle ADC =$

If 2  $\angle$  intersect the same arc then the  $\angle$ 's are congruent.

[Inscribed]  $\angle$  [Central  $\angle$ ]



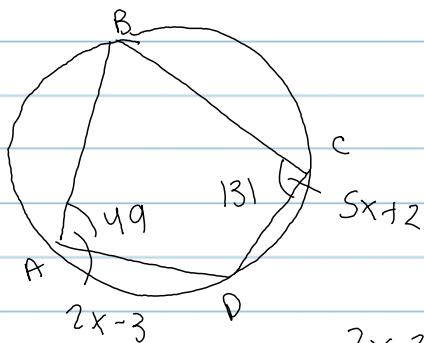
$2A = \widehat{BCD}$

$2C = \widehat{BAD}$

$\widehat{BCD} + \widehat{BAD} = 360^\circ$

$2A + 2C = 360$

$A + C = 180$



$2x - 3 + 5x + 2 = 180$

$7x - 1 = 180$

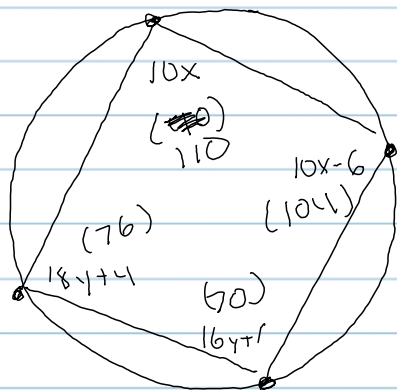
$+1 \quad +1$

$x = 26$

$7x = 181 \quad x = 25.9$

Geometry B3

standard form  $Ax + By = C$



$$10x + 16y + 6 = 180$$

$$10x + 16y = 174$$

$$10x - 6 + 18y + 1 = 180$$

$$10x - 6 + 18y = 179$$

$$10x + 18y - 5 = 180$$

$$10x + 18y = 185$$

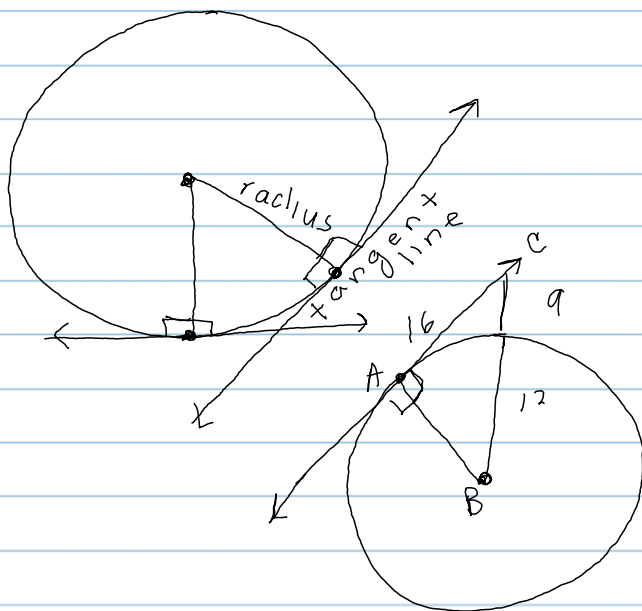
$$\begin{cases} (-) & 10x + 16y = 174 \\ (+) & 10x + 18y = 182 \end{cases}$$

$$-10x - 16y = 174$$

$$2y = 8$$

$$y = 4$$

$$x = 11$$



Show  $\overline{AC} = 12$       $20^2 = 16^2 + x^2$

$$20^2 = 16^2 + 12^2 \quad 400 = 256$$

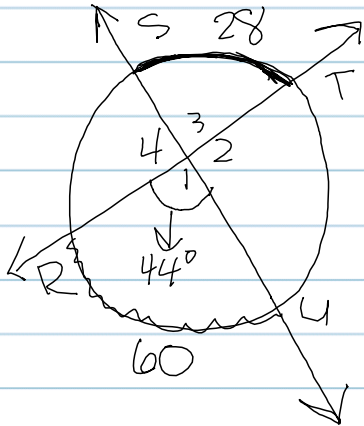
Handwritten scribbles

# Geometry B3

Pangie Rullo

June 6, 2011

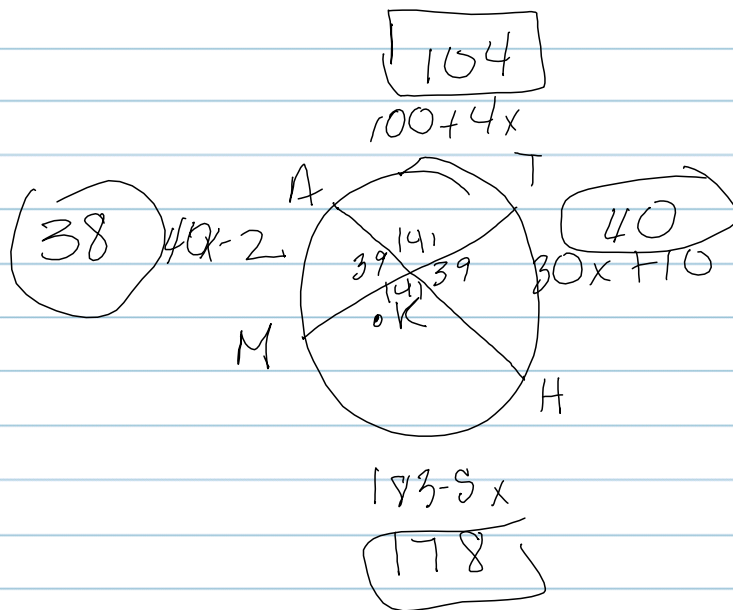
## Tangent



$$m\angle 1 = \frac{1}{2}(m\widehat{RU} + \widehat{ST})$$

$$m\angle 1 = \frac{1}{2} \frac{60 + 28}{2}$$

$$m\angle 1 = 44$$



① Total all arcs = 360

②  $m\angle 1 = \frac{178 + 104}{2} = 141$

$$360 = 100 + 4x + 40x - 2 + 183 - 5x + 30x + 10$$

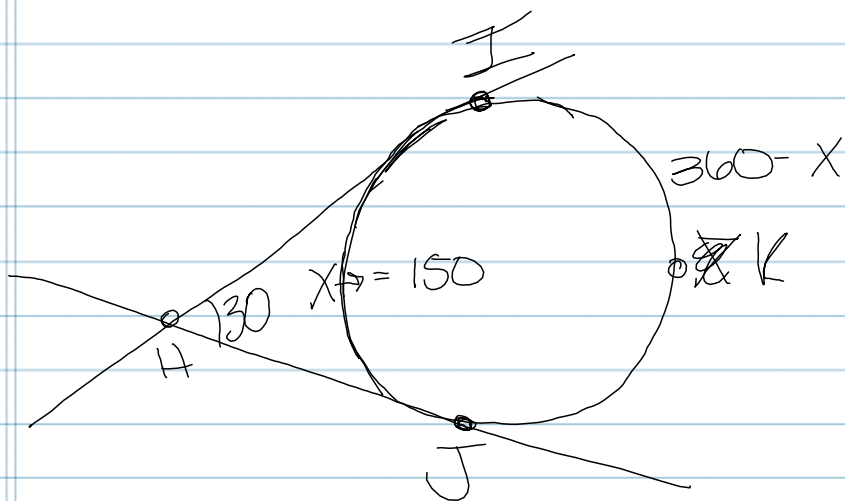
$$291 + 69x - 2$$

$$69x = 69$$

$$x = 1$$

# Geometry B3

Paige Rullo  
Lalime. B3  
June 6, 2011



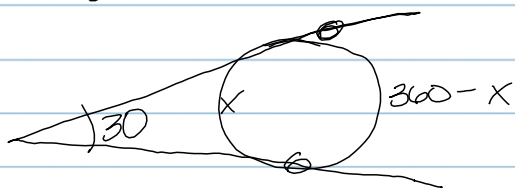
$$m\angle IHS = \frac{1}{2}(\widehat{IK} - \widehat{IJ})$$

$$= \frac{360 - x - x}{2}$$

$$m\angle IHS = \frac{360 - 2x}{2}$$

$$m\angle IHS = 180 - x$$

find x.



$$30 = \frac{360 - x - x}{2}$$

$$360 - 2x$$

$$30 = \frac{360 - 2x}{2}$$

$$-180 - 180$$

$$-150 = -x$$

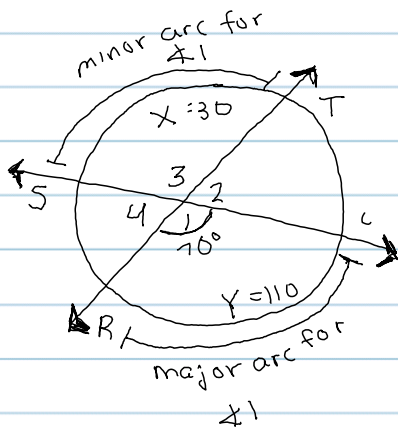
$$x = 150$$

When intersect outside circle you -  
When intersect inside circle you + (add)

Geometry B3

[Secants

↓  
tangents]



\* Intersect inside the circle

\* [inside means plus] \*

$$m\angle 1 = \frac{(m\widehat{RU} + m\widehat{ST})}{2}$$

$$\angle 1 = 70^\circ$$

$$(2) m\angle 1 = \frac{x+y}{2} \cdot 2$$

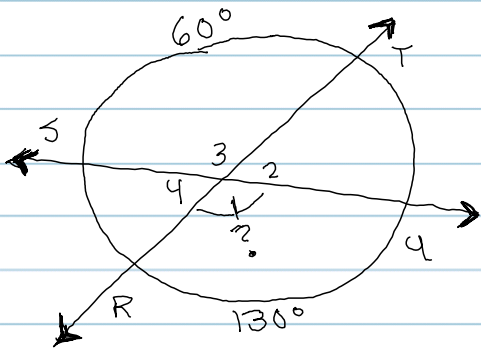
$$m\widehat{ST} = 30^\circ = x$$

$$m\widehat{RU} = y$$

$$2(m\angle 1) - x = y$$

$$140 - 30 = y$$

$$110 = y$$



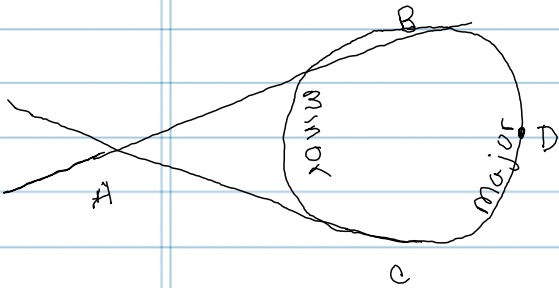
$$m\widehat{ST} = 60$$

$$m\widehat{RU} = 130$$

$$m\angle 1 = ?$$

$$m\angle 1 = \frac{60 + 130}{2}$$

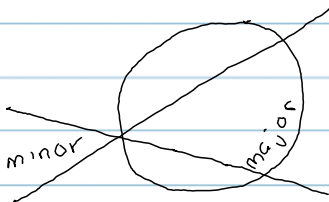
$$m\angle 1 = 95^\circ$$



\* intersects outside the circle

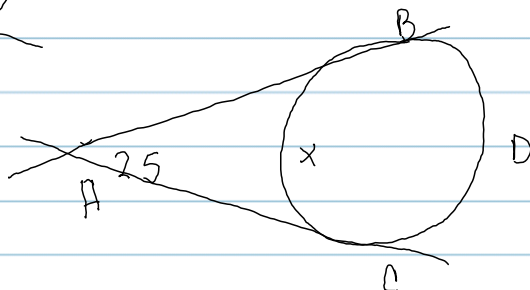
\* [outside means subtract] \*

$$m\angle BAC = \frac{m\widehat{BDC} - m\widehat{BC}}{2}$$



Solve for x

$$360 - x$$

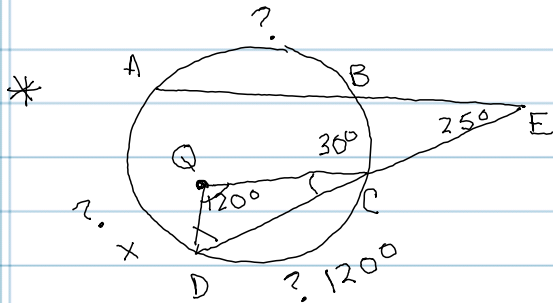


$$25 = \frac{360 - x - x}{2} \quad 25 = \frac{360 - 2x}{2}$$

$$x = 155$$

$$360 - 155 = 205$$

Geometry B3  
(cont)



in  $\odot Q$

$m\angle CQD = 120^\circ$

$m\widehat{BC} = 30^\circ$

$m\widehat{BEC} = 25^\circ$

find each measure

1)  $m\widehat{DC} = 120^\circ$

2)  $m\widehat{AD} = 80^\circ$

3)  $m\widehat{AB} = 110^\circ$

4)  $m\angle QDC = 30^\circ$

$m\widehat{AB} + m\widehat{AD} + m\widehat{DC} = 330^\circ$

$25 = \frac{x-30}{2}$

$50 = x - 30$   
 $130 \quad +30$

$80 = \widehat{AD}$

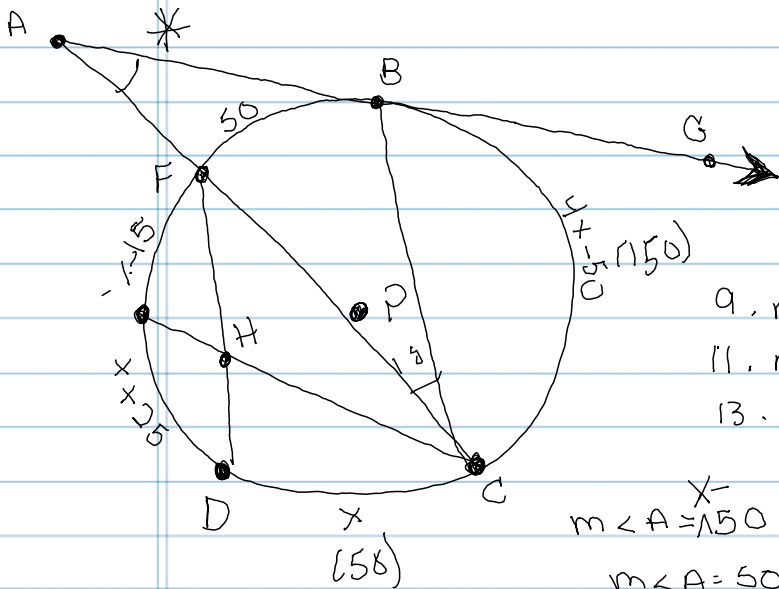
• Central angle

• intersecting secant (outside of circle)

• Circumference of a circle

• 2 radii, forming an isosceles  $\Delta$

[Vertex  $\angle$  of 120 / Base  $\angle$  are congruent]



in  $\odot P$ ,  $m\widehat{BC} = 4x - 50$ ,  $m\widehat{DE} = x + 25$ ,  $m\widehat{EF} = x - 15$   
 $m\widehat{CD} = x$  and  $m\widehat{FB} = 50$ . Find each measure

9.  $m\angle A = 50^\circ$

10.  $m\angle BCA = 25^\circ$

11.  $m\angle ABC = 105^\circ$

12.  $m\angle GBC = 75^\circ$

13.  $m\angle FHE = 42.5^\circ$

14.  $m\angle CFD = 25^\circ$

$m\angle A = 150 - x$

$m\angle A = 50 - x^2$

$50 + x - 15 + x + 25 + x + 4x - 50 = 360$

$x + 50 - 15 + 25 + 4x - 50 = 360$

$x + 10 = 360$   
 $-10 \quad -10$

$x = 350$

$x = 43 \frac{50}{8}$