

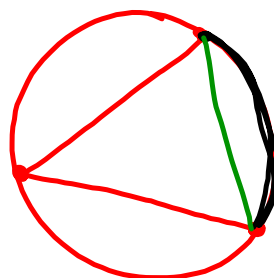
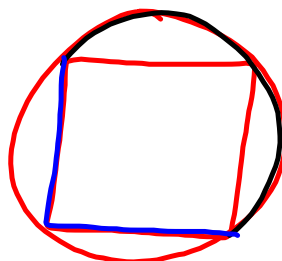
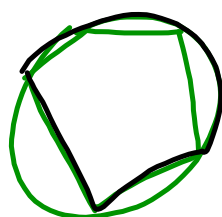
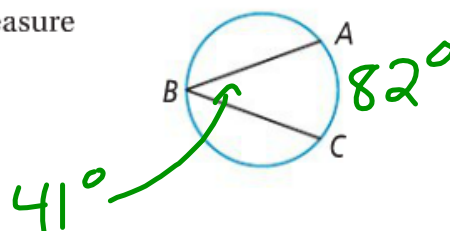
# Geometry

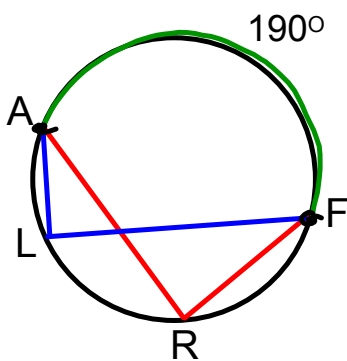
Chapter 12

Section 12-3

The measure of an inscribed angle is half the measure of its intercepted arc.

$$m\angle B = \frac{1}{2} m\widehat{AC}$$





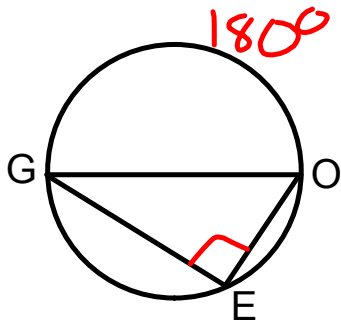
What is the measure of  $\angle ARF$ ?

$$m\angle ARF = \frac{1}{2}(190) \\ = 95$$

What is the measure of  $\angle ALF$ ?

$$m\angle ALF = \frac{1}{2}(190) \\ = 95$$

If 2  $\angle$ s intercept same arc,  
then  $\angle$ s  $\cong$



GO is a diameter of the circle.

What is  $m\angle GEO$ ?

$$m\angle GEO = \frac{1}{2}(180) \\ = 90$$

If  $EO = 16$  and  $GE = 30$ , find the length of  $GO$ .

$$16^2 + 30^2 = GO^2 \\ 256 + 900 = GO^2 \\ \sqrt{1156} = \sqrt{GO^2} \\ 34 = GO$$

If  $\triangle$  inscribed  
in a circle  
and one side  
is diameter,  
then it is  
right  $\triangle$

What is:  $m\angle MAN + m\angle MUN?$

$$\frac{1}{2}(133+127) + \frac{1}{2}(100)$$

$$130 + 50$$

$$180$$

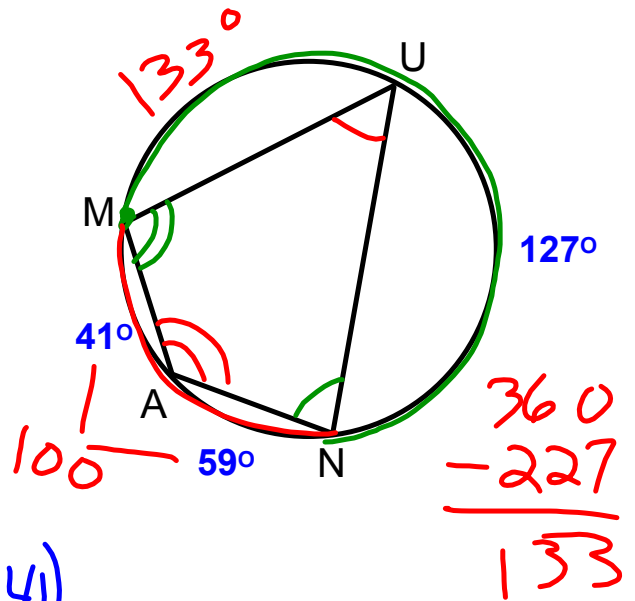
What is:  $m\angle UMA + m\angle UNA?$

$$\frac{1}{2}(127+59) + \frac{1}{2}(133+41)$$

$$\frac{1}{2}(186) + \frac{1}{2}(174)$$

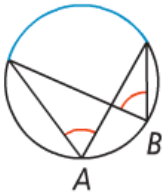
$$93 + 87$$

$$180$$

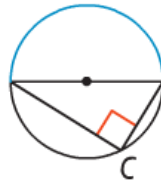


**Corollary 1**

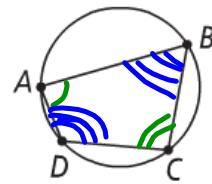
Two inscribed angles that intercept the same arc are congruent.

**Corollary 2**

An angle inscribed in a semicircle is a right angle.

**Corollary 3**

The opposite angles of a quadrilateral inscribed in a circle are supplementary.



$$m\angle A + m\angle C = 180$$

$$m\angle B + m\angle D = 180$$

# Homework

Pages 784 - 785

# 7-15 odd, 20, 28