

Because the radian measure of an angle of one full revolution is  $2\pi$ , you can obtain the following.

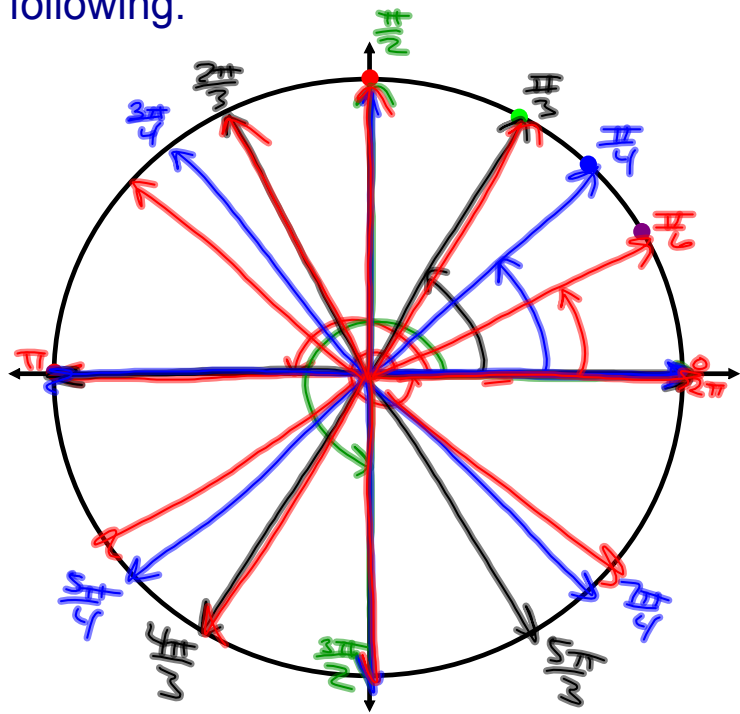
1/2 revolution =  
 $2\pi/2 = \pi$  radians

1/4 revolution =  
 $2\pi/4 = \pi/2$  radians

1/6 revolution =  
 $2\pi/6 = \pi/3$  radians

1/8 revolution =  
 $2\pi/8 = \pi/4$  radians

1/12 revolution =  
 $2\pi/12 = \pi/6$  radians



Quadrant Relationships

Because the radian measure of an angle of one full revolution is  $2\pi$ , you can obtain the following.

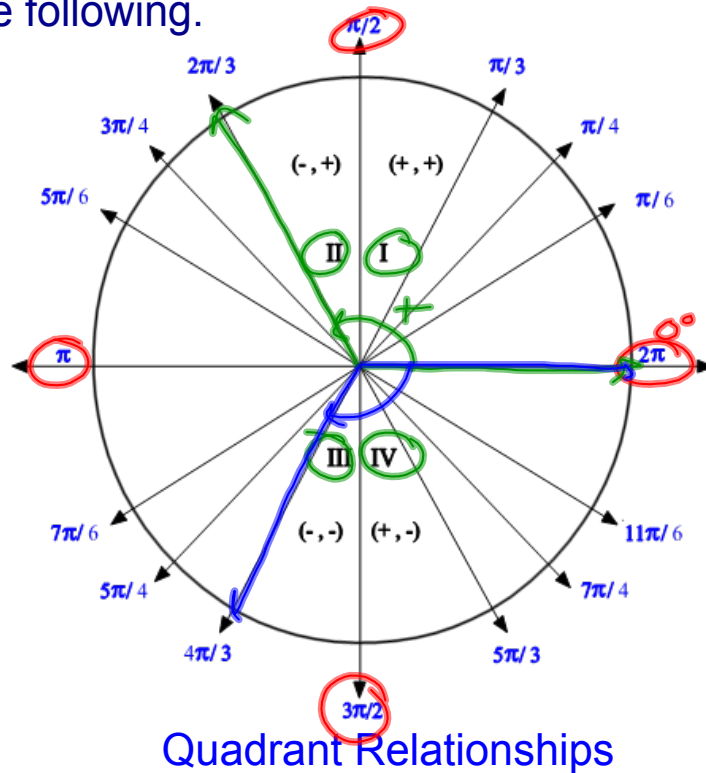
1/2 revolution =  
 $2\pi/2 = \pi$  radians

1/4 revolution =  
 $2\pi/4 = \pi/2$  radians

1/6 revolution =  
 $2\pi/6 = \pi/3$  radians

1/8 revolution =  
 $2\pi/8 = \pi/4$  radians

1/12 revolution =  
 $2\pi/12 = \pi/6$  radians



### Sketching and Finding Coterminal Angles

Two angles are coterminal if they have the same what?

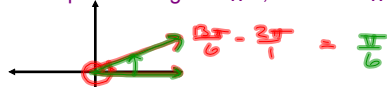
Initial & Terminal Sides

For instance, angles 0 and  $2\pi$  are coterminal, so are angles  $\pi/6$  and  $13\pi/6$ .

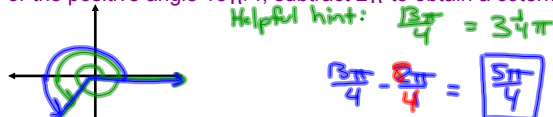
HINT: you can find coterminal angles by adding or subtracting  $2\pi$  (one revolution) to your given angle. A given angle  $\theta$  has many coterminal angles.

#### EXAMPLES:

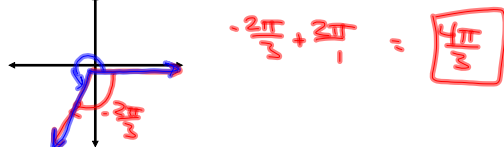
For the positive angle  $13\pi/6$ , subtract  $2\pi$  to obtain a coterminal angle.



For the positive angle  $13\pi/4$ , subtract  $2\pi$  to obtain a coterminal angle.



For the negative angle  $-2\pi/3$ , add  $2\pi$  to obtain a coterminal angle.



## REVIEW of Complementary and Supplementary Angles

Two positive angles  $\alpha$  and  $\beta$  are COMPLEMENTARY if their sum is  $\pi/2$ .

Two positive angles  $\alpha$  and  $\beta$  are SUPPLEMENTARY if their sum is  $\pi$ .

Find the complement and the supplement of  $4\pi/5$ .

Assignment:

p. 124

# 2-16 even,  
26, 28, 34, 36

**FOLLOW Directions Carefully!**