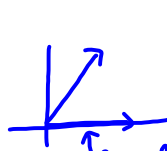


5.1 Angles & Degree Measures



A counterclockwise rotation gives us a (+) angle.

A clockwise rotation gives us a (-) angle.



Standard position if initial side is on the (+) x-axis.

Convert degrees of an angle to degrees, minutes, seconds. ($\frac{1}{60}$)

Ex $329.125^\circ \rightarrow 329^\circ + .125(60)$
 $329^\circ + 7.5'$
 $329^\circ + 7' + .5(60)$

Ex $35^\circ 12' 7'' \rightarrow 35^\circ + 12(\frac{1}{60}) + 7(\frac{1}{60 \cdot 60})$
 $\approx 35.202^\circ$

Converting rotations to degrees.

Ex 2 rotations counterclockwise

$2(360^\circ) = 720^\circ$

7.5 rotations clockwise

$7.5(-360) = -2700^\circ$

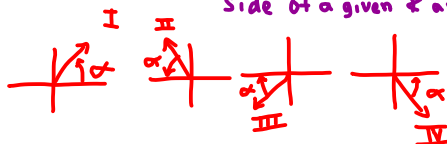
Coterminal θ 's - θ 's that have the same terminal side.

Ex $86^\circ \rightarrow 86 + 360k$
 ccw $\rightarrow 86 + 360 = 446^\circ$
 cw $\rightarrow 86 - 360 = -274^\circ$

Everytime we (+) or (-) 360° we get the same θ .



Reference θ - Acute θ formed by the terminal side of a given θ and the x-axis.



Ex $312^\circ \rightarrow 360 - 312 = 48^\circ$
 Ex $-195^\circ \rightarrow -195 + 360 = 165^\circ$
 $180 - 165 = 15^\circ$