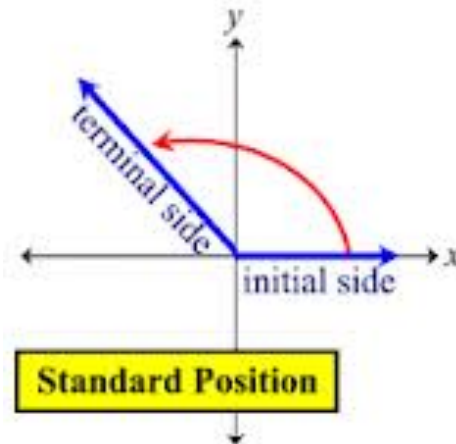


Chapter 3 Lesson 3: Angles in Standard Position,
Coterminal and Reference Angles



An angle is in standard position if its vertex is at the origin and its initial side lies on the positive x-axis.

Example) Draw an angle with the given measure in standard position.

a) 240°


d) -450°

b) 500°

e) 540°

c) -50°

f) -180°



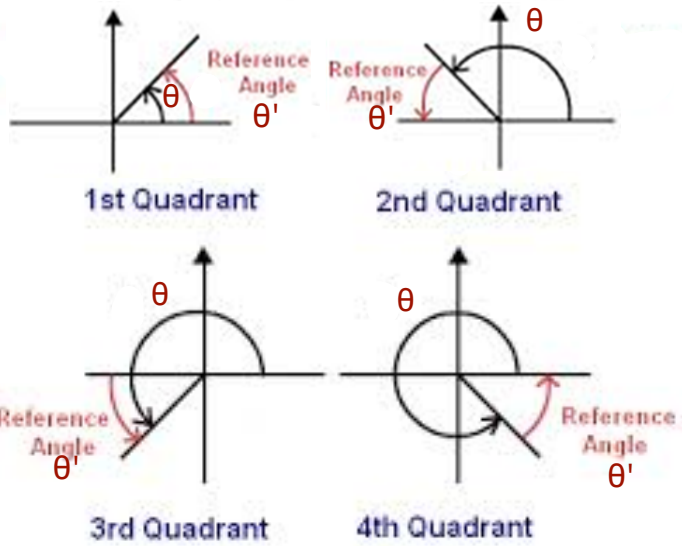
Two angles whose terminal sides coincide when they are in standard position are called **coterminal angles**.

Example) Sketch the angle 120° . List three angles that are coterminal with 120° .



Reference Angle Relationships

Let θ be an angle in standard position. The **reference angle** for θ is the acute angle θ' formed by the terminal side of θ and the x-axis.



Example) Find the reference angle for the angle given below.

a) 120°

e) -215°

b) -57°

f) 480°



Try these on your own!

Find the reference angle for the angle given below.

a) 260°

b) -650°

c) 300°

d) -800°



Classwork/Homework

Problem Set 3.3