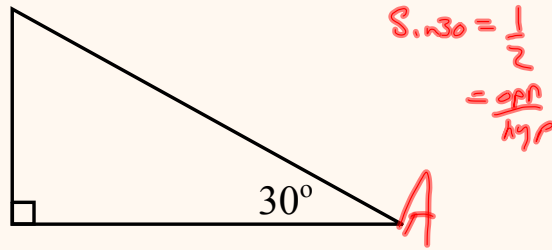


Warm up

In a right triangle, $\angle A = 30^\circ$. What are possible values for the opposite side and hypotenuse?



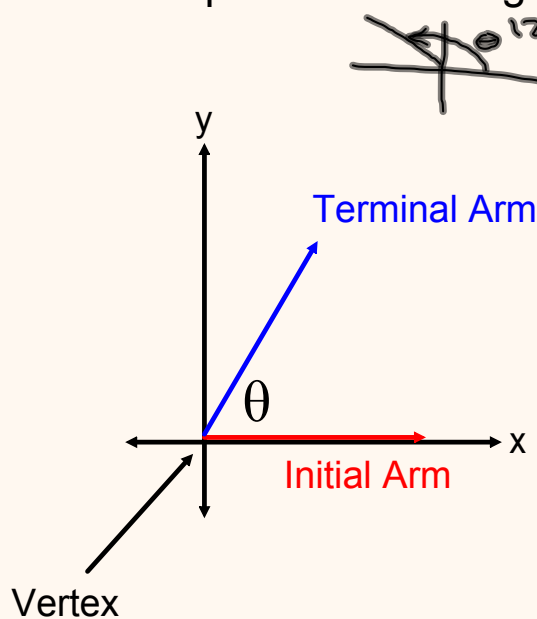
What are possible lengths for the opposite and adjacent?

MBF 3C
4.2

Co-Terminal and Related Angles

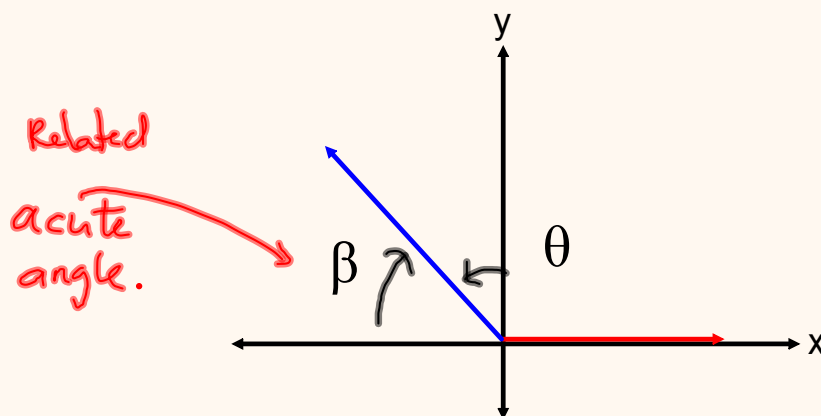
Showing Angles on a Grid

It is often helpful to show angles on a grid.



An angle is in standard position if its vertex lies at the origin, its initial arm lies on the positive x-axis and the angle is measured in a counter-clockwise direction.

Principal and Related Acute Angles



θ is in Standard Position. It is called the Principal Angle.

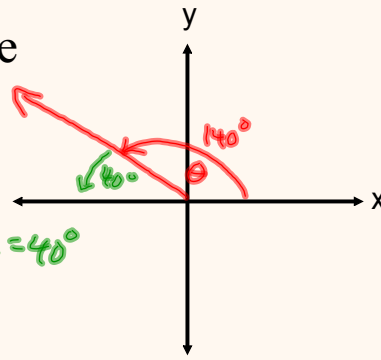
β is in called the Related Acute Angle. It is always less than 90° and is measured from the x-axis.

Examples

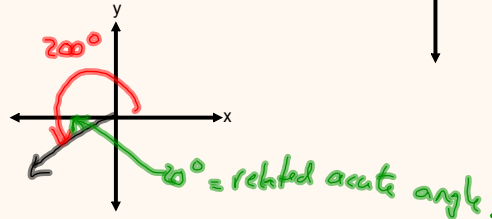
eg. Given the following principal angles, determine the related acute angles.

a) $\theta = 140^\circ$

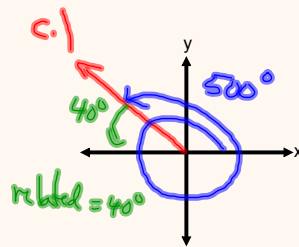
Related acute angle = 40°



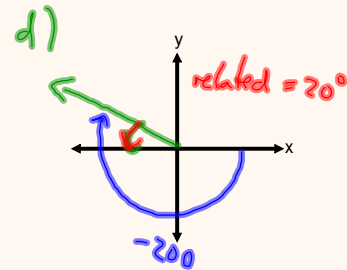
b) $\theta = 200^\circ$



c) $\theta = 500^\circ$



d) $\theta = -200^\circ$



Investigation

Complete the Investigation:
Exploring Trigonometric Ratios for Angles
Greater than 90°

Homework:

Complete Investigation