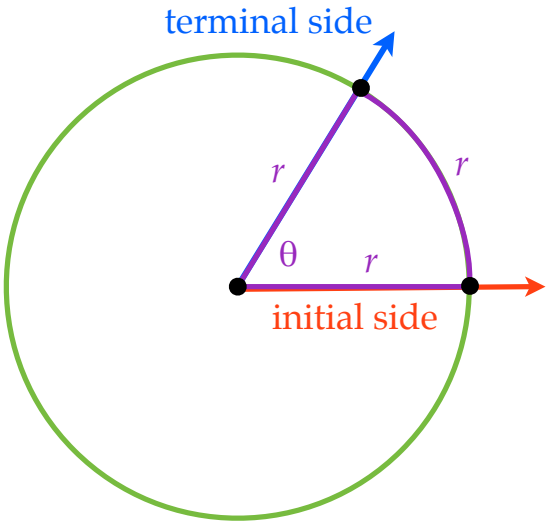
Angles Measured in Radians

Name _____

Date _____ Period _____

How to create an angle measuring 1 radian

θ has a measure of 1 radian



How to create an angle measuring 1 radian

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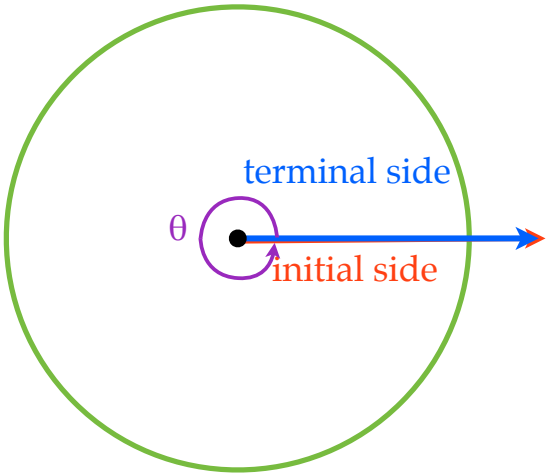
One revolution has a measure of 2π radians

θ has a measure of 2π radians



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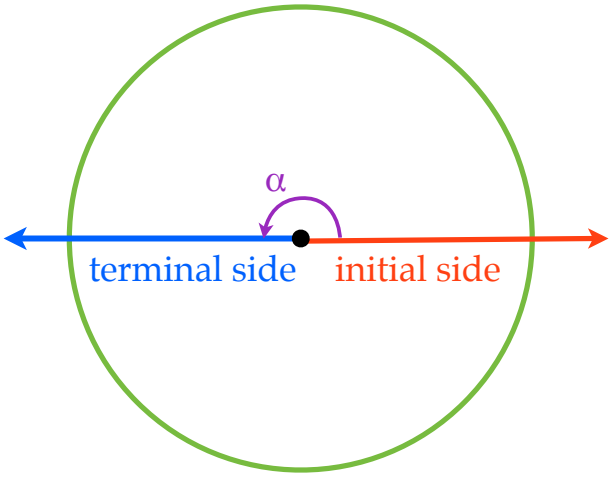
$\frac{1}{2}$ revolution has a measure of π radians

α has a measure of π radians



How to create an angle measuring 1 radian

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One revolution has a measure of 2π radians

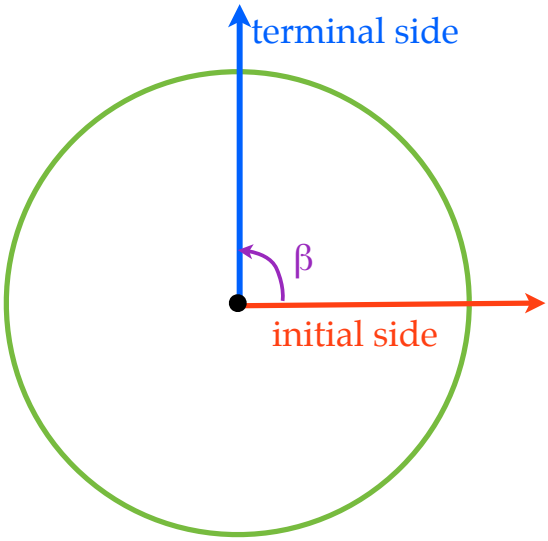
θ has a measure of 2π radians

$\frac{1}{2}$ revolution has a measure of π radians

α has a measure of π radians

$\frac{1}{4}$ revolution has a measure of $\frac{\pi}{2}$ radians

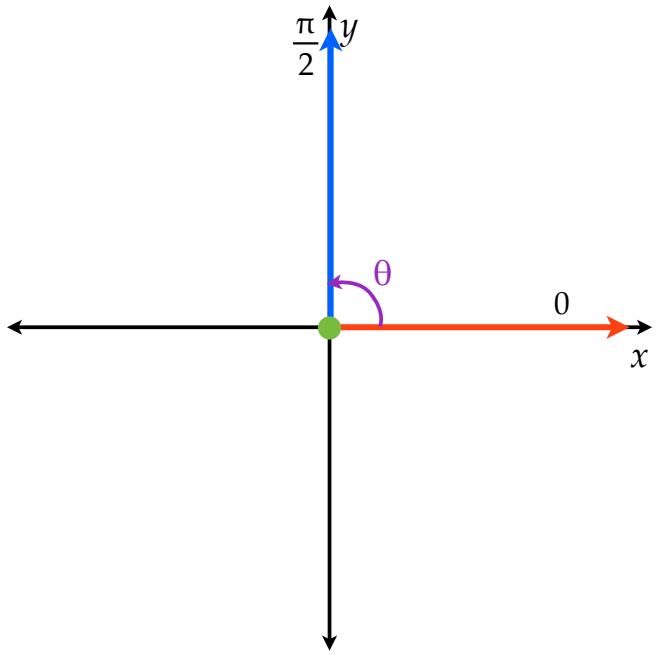
β has a measure of $\frac{\pi}{2}$ radians



Given θ is in standard position...

if $\theta = \frac{\pi}{2}$, θ lies on the positive y-axis

θ is a right angle



Given θ is in standard position...

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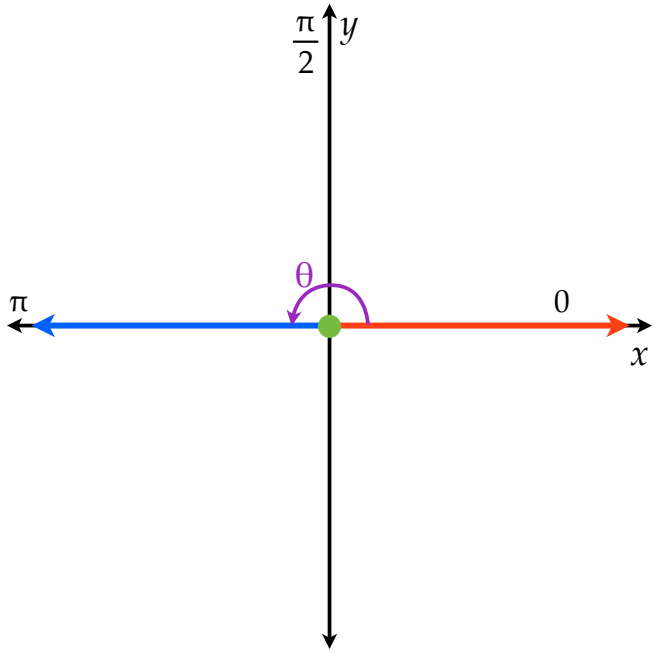
θ is a right angle

if $\theta = \pi$, θ lies on the negative x-axis

θ is a straight angle



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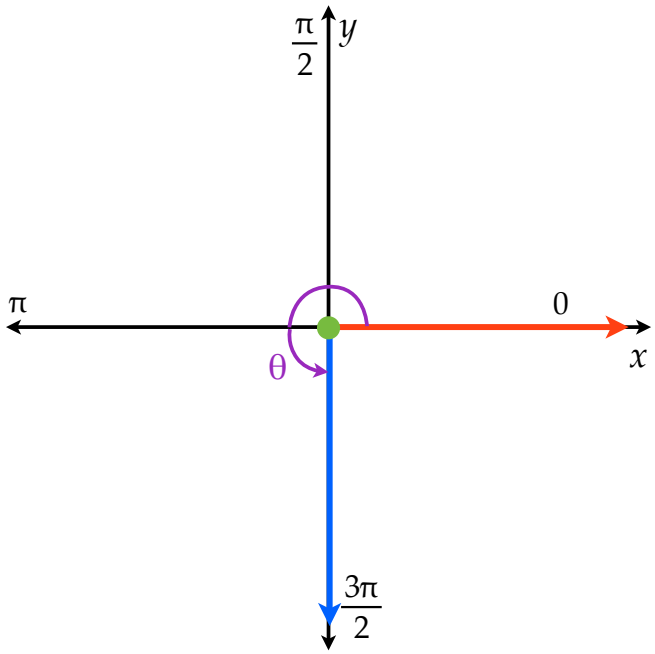
if $\theta = \frac{3\pi}{2}$, θ lies on the negative y-axis



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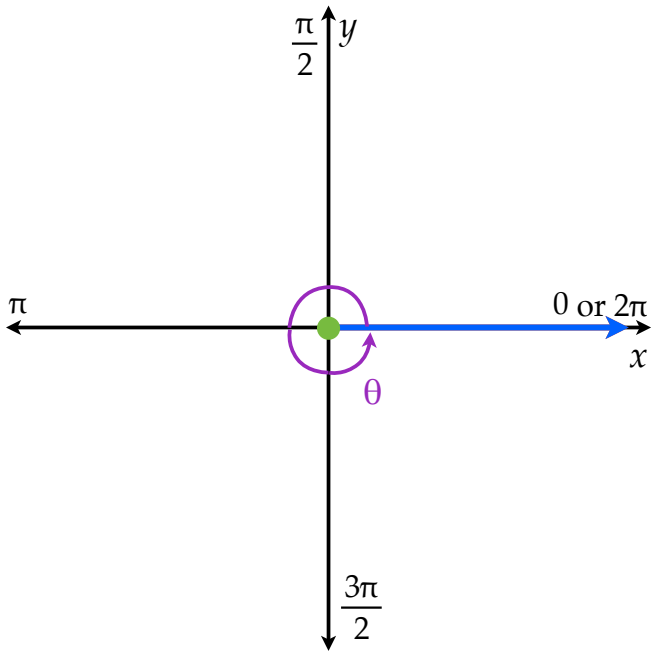
if $\theta = \frac{3\pi}{2}$, θ lies on the negative y-axis

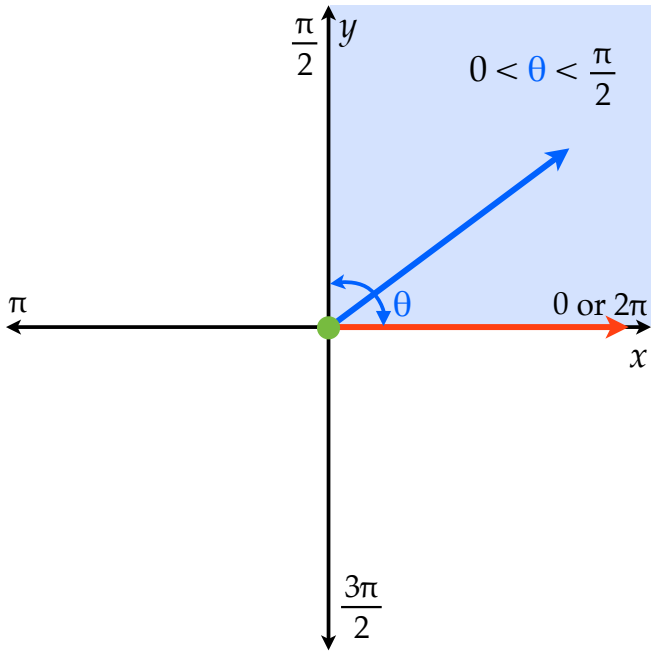
if $\theta = 2\pi$, θ lies on the positive x-axis

Quadrant Angles



Given θ is in standard position...

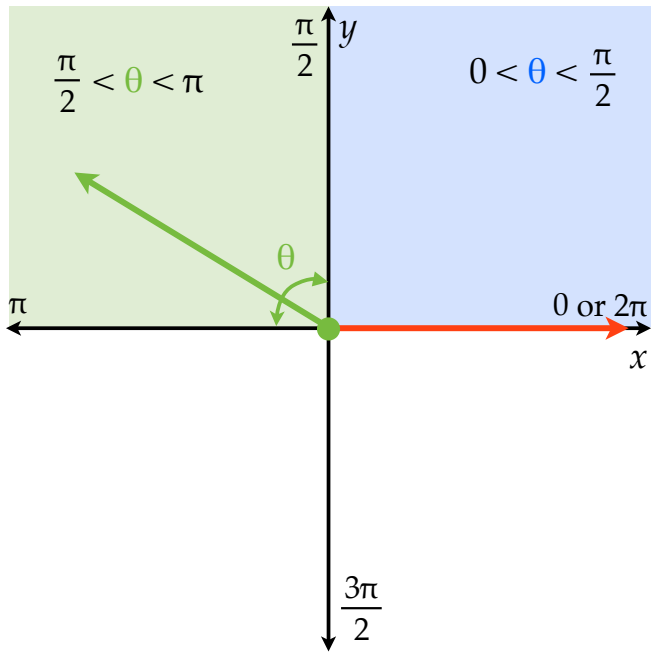
if $0 < \theta < \frac{\pi}{2}$, θ lies in quadrant 1



Given θ is in standard position...

if $0 < \theta < \frac{\pi}{2}$, θ lies in quadrant 1

if $\frac{\pi}{2} < \theta < \pi$, θ lies in quadrant 2



Given θ is in standard position...

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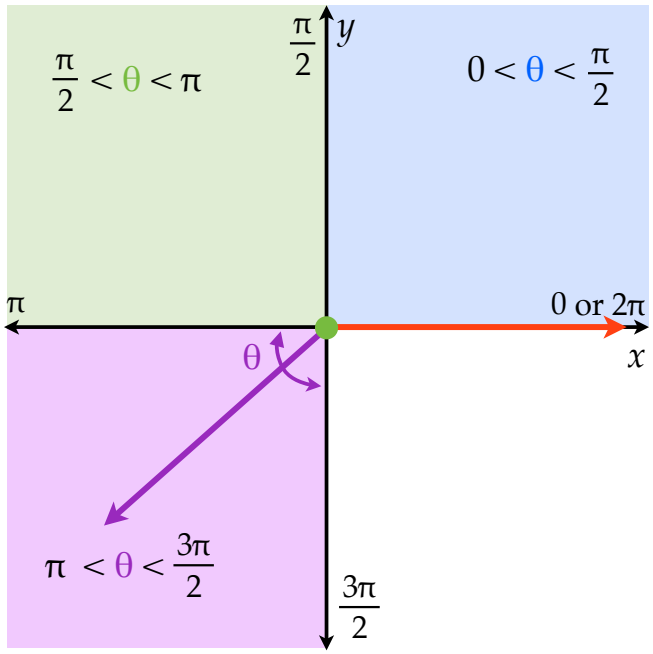
if $\pi < \theta < \frac{3\pi}{2}$, θ lies in quadrant 3



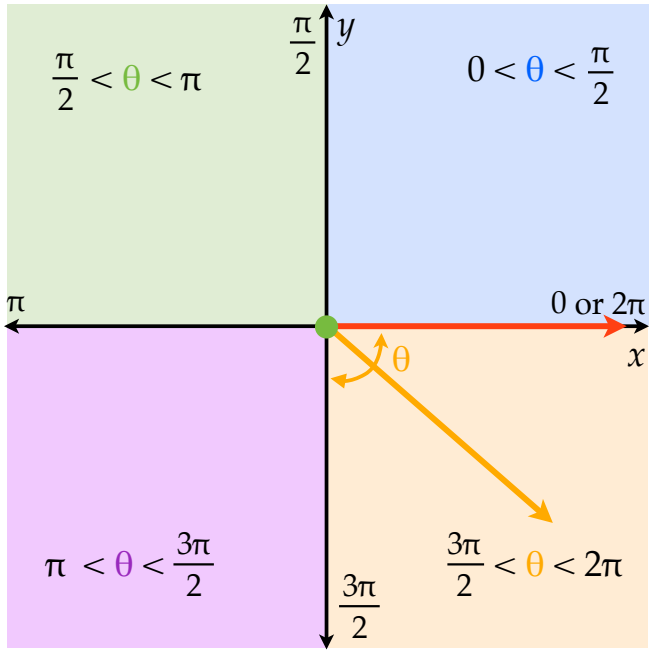
Given θ is in standard position...

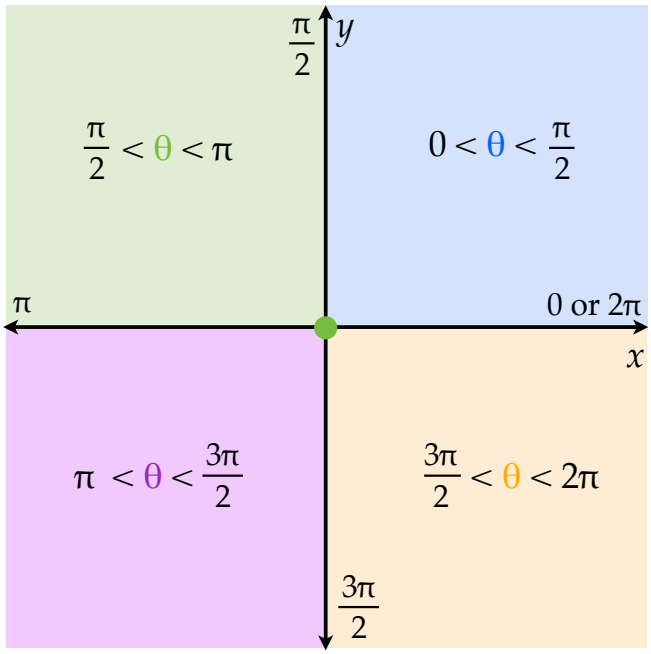
if $0 < \theta < \frac{\pi}{2}$, θ lies in quadrant 1

if $\frac{\pi}{2} < \theta < \pi$, θ lies in quadrant 2

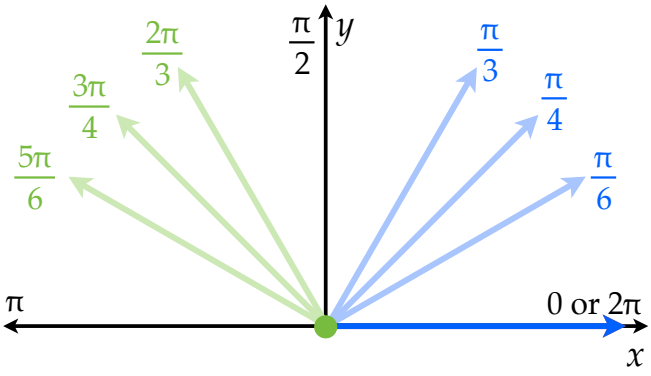
if $\pi < \theta < \frac{3\pi}{2}$, θ lies in quadrant 3

if $\frac{3\pi}{2} < \theta < 2\pi$, θ lies in quadrant 4





$\frac{2\pi}{3} = 120°$ $\frac{3\pi}{4} = 135°$ $\frac{5\pi}{6} = 150°$



$\frac{\pi}{6} = 30°$ $\frac{\pi}{4} = 45°$ $\frac{\pi}{3} = 60°$

Common Angles in Radian Form