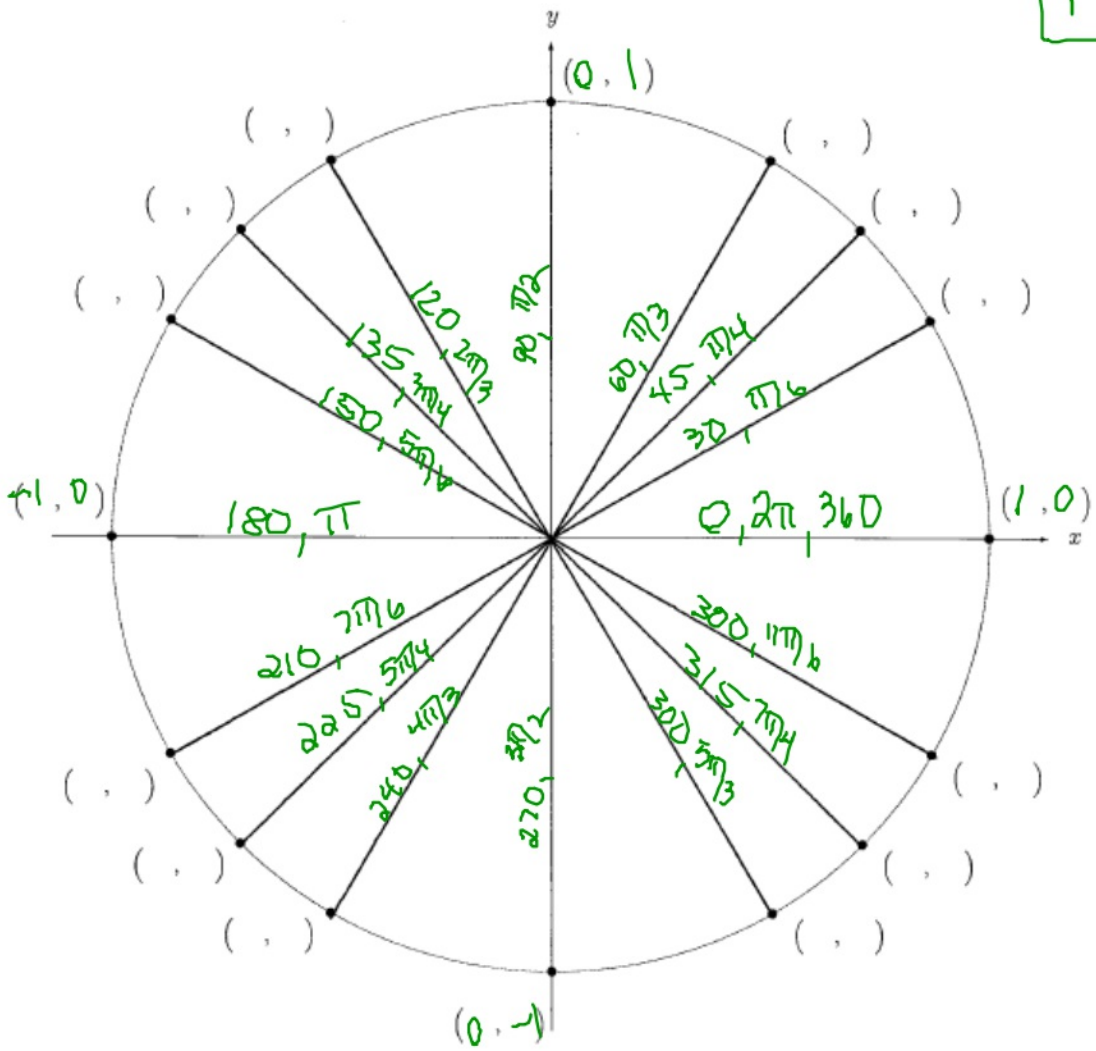
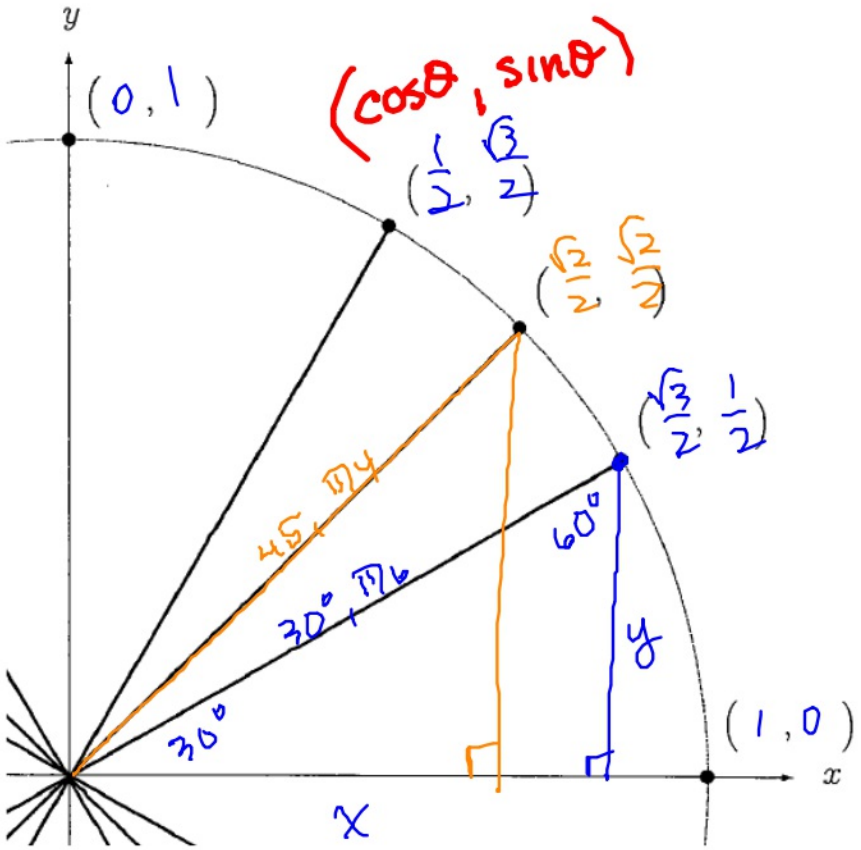
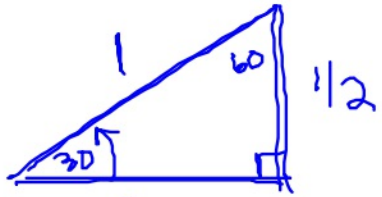
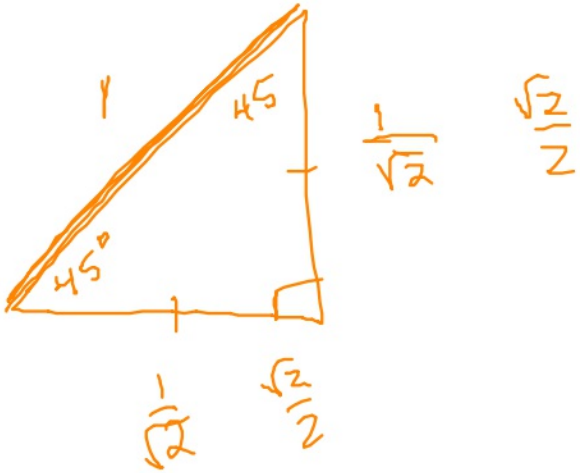

r = 1
y
x
(0, 1)
(1, 0)
(-1, 0)
(0, -1)
90, π/2
60, π/3
45, π/4
30, π/6
120, 2π/3
135, 3π/4
150, 5π/6
180, π
0, 2π, 360
210, 7π/6
225, 5π/4
240, 4π/3
270, 3π/2
300, 5π/3
315, 7π/4
330, 11π/6


y
(0, 1)
(cosθ, sinθ)
(1/2, √3/2)
(√2/2, √2/2)
(√3/2, 1/2)
45°, π/4
30°, π/6
60°
y
30°
(1, 0)
x
x


1
60
1/2
30
√3/2


1
45
1/√2
√2/2
45°
1/√2
√2/2

Using unit circle

$\sin\theta = \frac{y}{1} = y$

$\cos\theta = \frac{x}{1} = x$

$\tan\theta = \frac{y}{x}$

$\cot\theta = \frac{x}{y}$

$\sec\theta = \frac{1}{x}$

$\csc\theta = \frac{1}{y}$

$\sin \pi/6 = 1/2$

$\cos 5\pi/4 = \frac{-\sqrt{2}}{2}$

$\tan 7\pi/6 = \frac{+1/2}{+\sqrt{3}/2} = \frac{1}{\sqrt{3}}$

$= \frac{\sqrt{3}}{3}$

$\cot \frac{3\pi}{2} = \frac{0}{-1} = 0$

$\tan 3\pi/2 = \frac{-1}{0} = \phi$ DNE

$\sec 7\pi/4 = \frac{2}{\sqrt{2}} = \frac{2\sqrt{2}}{2} = \sqrt{2}$

$\csc -\frac{2\pi}{3} = \frac{-2}{\sqrt{3}} = \frac{-2\sqrt{3}}{3}$