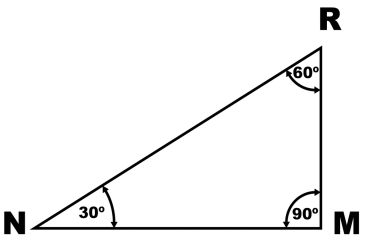
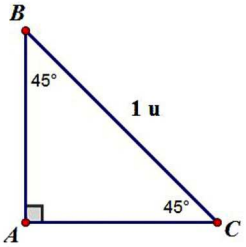
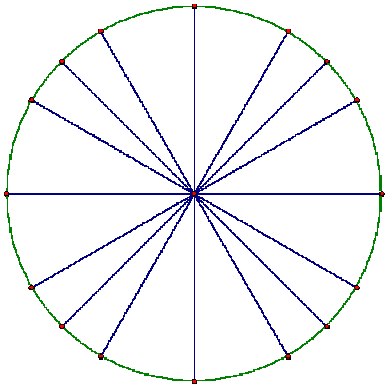
The Unit Circle (Section 4.2)

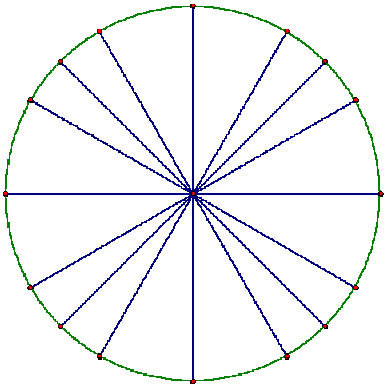
Warm-up: Use the Pythagorean Theorem to find the lengths of the missing sides.





Unit Circle: Find the coordinates of the indicated points.





Why do we need these coordinates? _____

Review the Trigonometric Ratios: SOHCAHTOA

1. $\sin\theta =$ _____ 2. $\cos\theta =$ _____ 3. $\tan\theta =$ _____

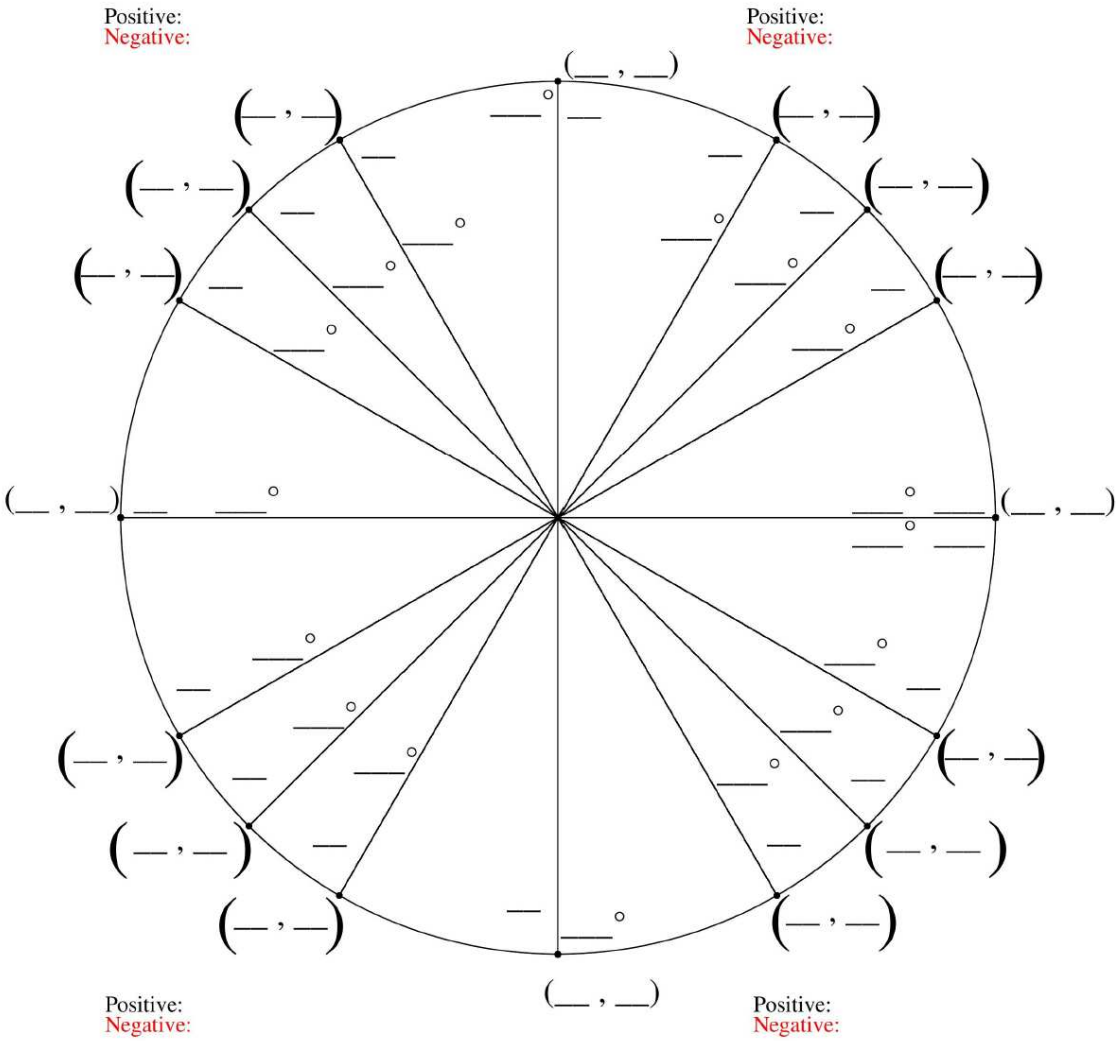
Definitions of Trigonometric Functions

$$\sin\theta = y \qquad \cos\theta = x \qquad \tan\theta = \frac{y}{x}$$

$$\csc\theta = \frac{1}{y} \qquad \sec\theta = \frac{1}{x} \qquad \cot\theta = \frac{x}{y}$$

The Unit Circle (Section 4.2)

The Complete Unit Circle



Example: Evaluate the six trig functions at the following angle measures.

a) $\frac{\pi}{6}$ b) $\frac{5\pi}{4}$ c) π d) $-\frac{\pi}{3}$