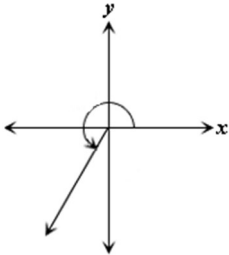
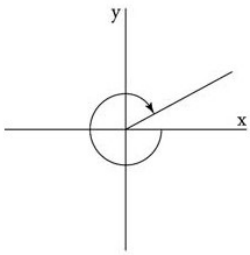
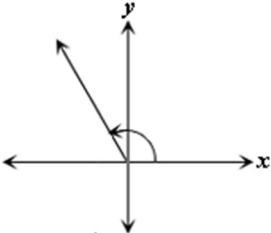
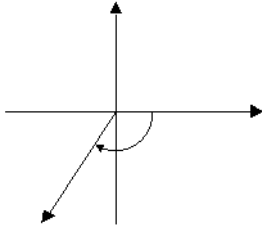


Math 30-1 Trigonometry, Quiz 1

NR 1. Determine the principal angle, in exact radians, for $\frac{8\pi}{3}$.

Use the following information to answer the next question.

Each diagram below represents a sketch of a different angle in standard position.	
Diagram 1 	Diagram 2 
Diagram 3 	Diagram 4 

NR2. Match each of the diagrams numbered above with the angle measure that it represents as listed below

Diagram: _____, _____, _____, _____
 Angle: $-\frac{7\pi}{4}$, 130° , 230° , $-\frac{3\pi}{4}$

NR3. The value of $\sin 60^\circ \cos 45^\circ$ can be expressed in simplified form as $\frac{\sqrt{m}}{n}$ where $m, n \in \mathbb{N}$.

The value of m and n , respectively, are _____ and _____.

MC1. Which angle in standard position is **not** co-terminal with the others?

- a) -190°
- b) -170°
- c) 550°
- d) 190°

MC2. For $\frac{\pi}{2} \leq \theta \leq \pi$ which of the following is true?

- a) $\sin\theta < 0$ and $\cos\theta > 0$ c) $\tan\theta < 0$ and $\cos\theta > 0$
b) $\tan\theta > 0$ and $\sin\theta < 0$ d) $\sin\theta > 0$ and $\cos\theta < 0$

MC3. If only $\sec A$ and $\cos A$ are positive values, then

- a) $0 < A < \frac{\pi}{2}$ c) $\pi < A < \frac{3\pi}{2}$
b) $\frac{\pi}{2} < A < \pi$ d) $\frac{3\pi}{2} < A < 2\pi$

MC4. Given that $\cos\theta = \frac{-7}{8}$ and $\tan\theta > 0$, determine the exact value for $\csc\theta$

- a) $\frac{-\sqrt{15}}{8}$ c) $\frac{-8}{\sqrt{15}}$
b) $\frac{\sqrt{15}}{8}$ d) $\frac{8}{\sqrt{15}}$

NR 4. If $\csc\theta = 1.8536$ and θ is an acute angle, determine θ in radians to the nearest hundredth.

NR 5. Point A is the intersection point of the unit circle and the terminal arm of 110° where 110° is an angle drawn in standard position. State the coordinates of the point (x, y) for point A rounding each coordinate to the nearest hundredth

(____,____)

NR 6. A central angle of 120° subtends an arc. If the radius is 16.8cm, determine the arc length to the nearest tenth of a cm.

MC 5. A circle has a center at point O and a radius of 12cm. Arc PQ on this circle is 25cm long. The measure of angle POQ in degrees is :

- a) 0.48 c) 27.5
b) 2.08 d) 119

MC 6. A point on the unit circle is $\left(\frac{-4}{5}, \frac{-3}{5}\right)$. An angle in standard position with a terminal arm passing through this point is

a) 37°

c) 217°

b) 53°

d) 233°

MC 7. In a unit circle, determine the shortest arc length from point $\left(\frac{-1}{2}, \frac{\sqrt{3}}{2}\right)$ to point $(0, -1)$

a) $\frac{2\pi}{3} \text{ units}$

c) $\frac{4\pi}{3} \text{ units}$

b) $\frac{5\pi}{6} \text{ units}$

d) $\pi \text{ units}$

WR. 1 (4 marks)

Determine the solutions to the equations, over the identified domain.

a) $3\cos^2 A = 2\cos A$ where $0^\circ \leq A < 360^\circ$

b) $\sin^2 x - \sin x = 2$ where $0 \leq x < 2\pi$

WR2. (2 marks)

Determine the solution to the equation $3\sec x - 6 = 0$ in the domain $x \in R$, where x is in radians.