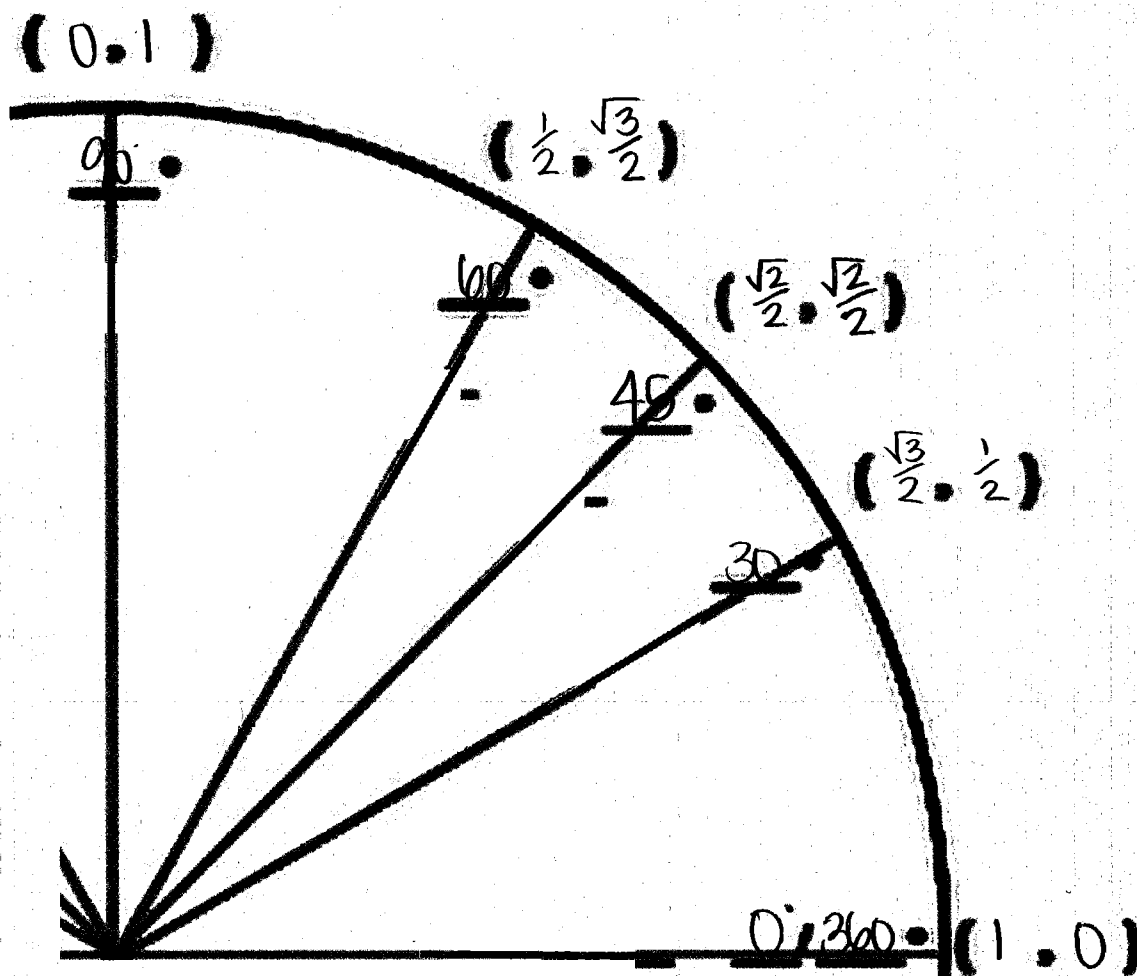


Algebra 2 – Unit Circle Review  
Part I – No Notes/No Calculator

Name: Mikey Hr: \_\_\_\_\_

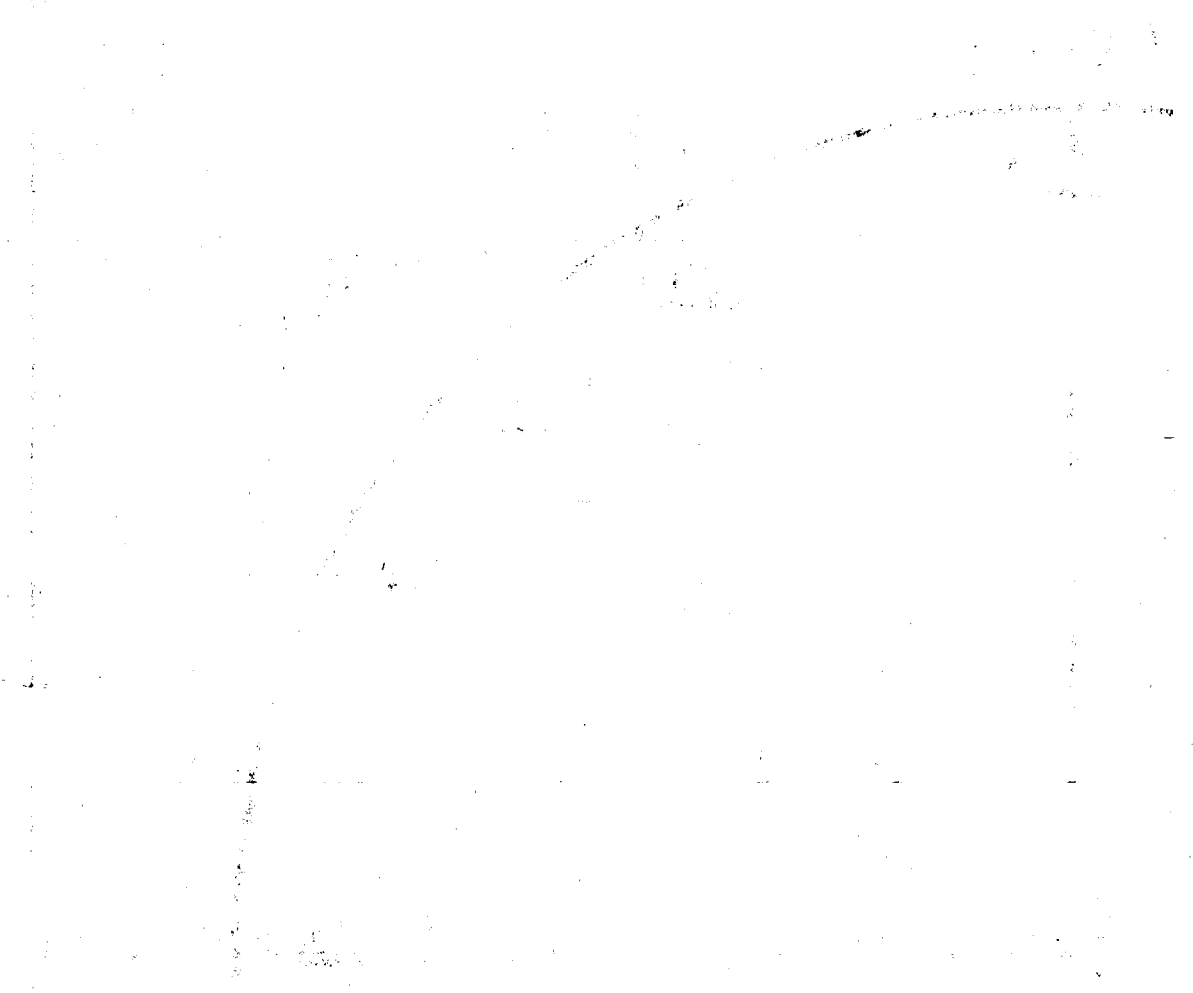
Complete the first quadrant of the unit circle. Indicate the **degrees** and the **ordered pair** for all 5 angles shown here.



1944

1944

1944

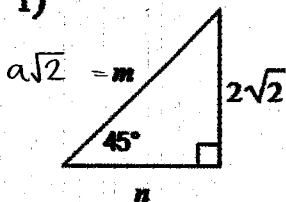


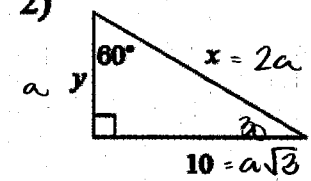
# Algebra 2 – Unit Circle Review

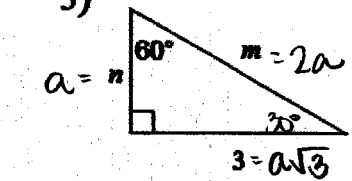
Name: \_\_\_\_\_ Hr: \_\_\_\_\_

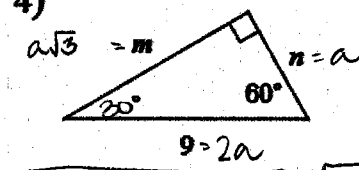
## Part II – You may use your paper plate unit circle!

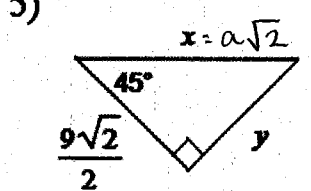
Find the missing side lengths for the triangles below. Leave your answers as radicals in simplest form.

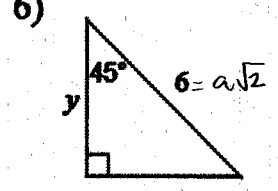
1)   $m = 2\sqrt{2} \cdot \sqrt{2} = 2\sqrt{4}$   
 $m = 4$   
 $n = 2\sqrt{2}$

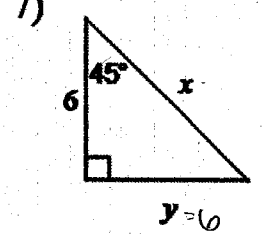
2)   $a = \frac{10}{\sqrt{3}} = \frac{10\sqrt{3}}{3}$   
 $y = \frac{10\sqrt{3}}{3}$   $x = \frac{20\sqrt{3}}{3}$

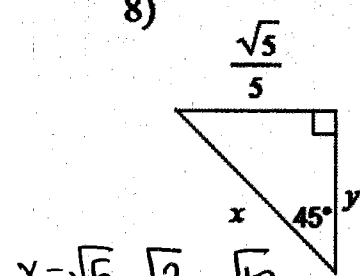
3)   $a = \frac{3}{\sqrt{3}} = \frac{3\sqrt{3}}{3} = \sqrt{3}$   
 $n = \sqrt{3}$   
 $m = 2\sqrt{3}$

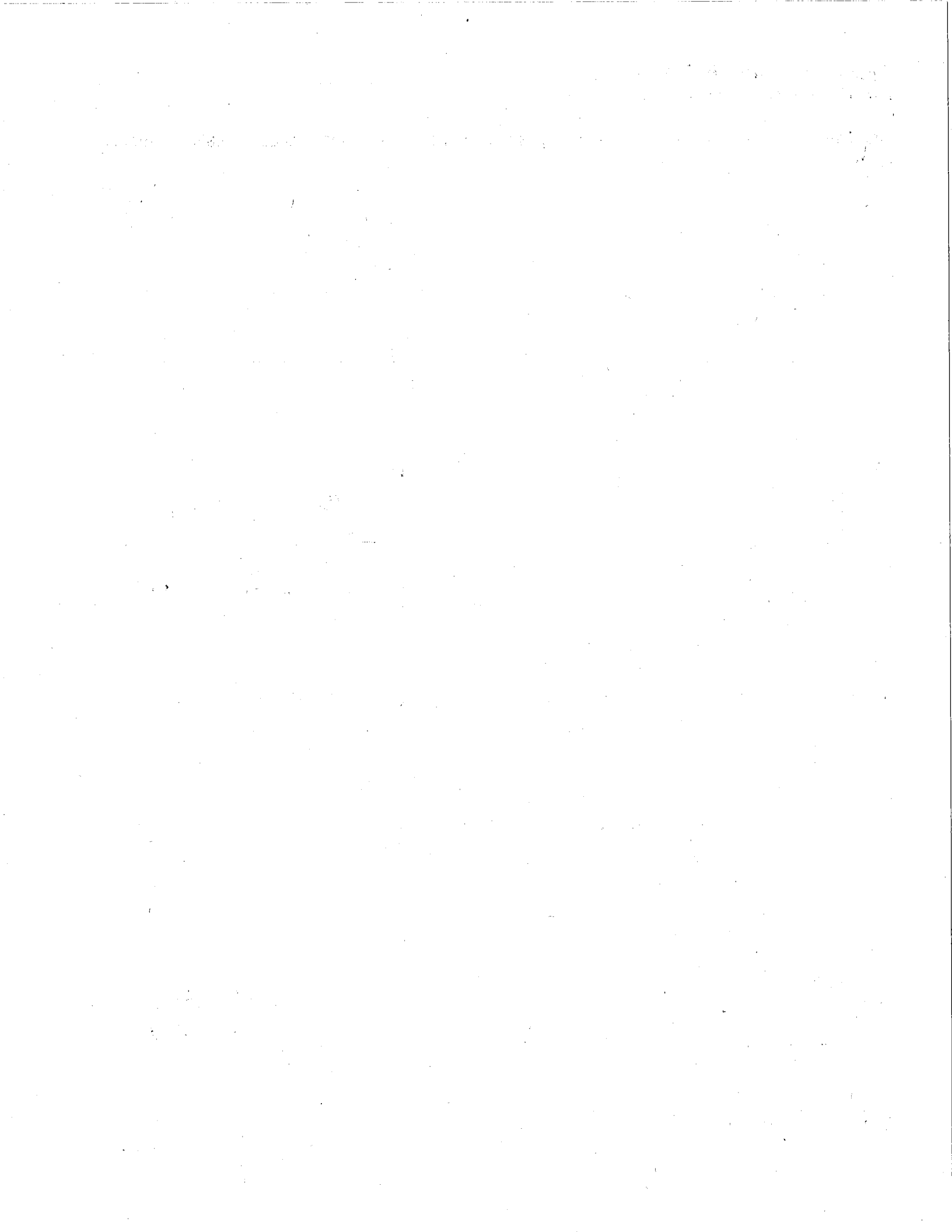
4)   $n = \frac{9}{2}$  (or 4.5)  $m = \frac{9\sqrt{3}}{2}$  (or  $4.5\sqrt{3}$ )

5)   $x = \frac{9\sqrt{2} \cdot \sqrt{2}}{2} = \frac{9 \cdot 2}{2} = 9$   
 $y = \frac{9\sqrt{2}}{2}$   $x = 9$

6)   $x = y = 3\sqrt{2}$

7)   $y = 6$   $x = 6\sqrt{2}$

8)   $x = \frac{\sqrt{5}}{5} \cdot \sqrt{2} = \frac{\sqrt{10}}{5}$   $y = \frac{\sqrt{5}}{5}$



Find the **exact value** of each trigonometric function. HINT: Use your unit circle!!!  
**Decimal answers will NOT be accepted.**

9.  $\cos(150^\circ)$

$$\boxed{\frac{-\sqrt{3}}{2}}$$

11.  $\cos(-60^\circ)$

$$\boxed{\frac{1}{2}}$$

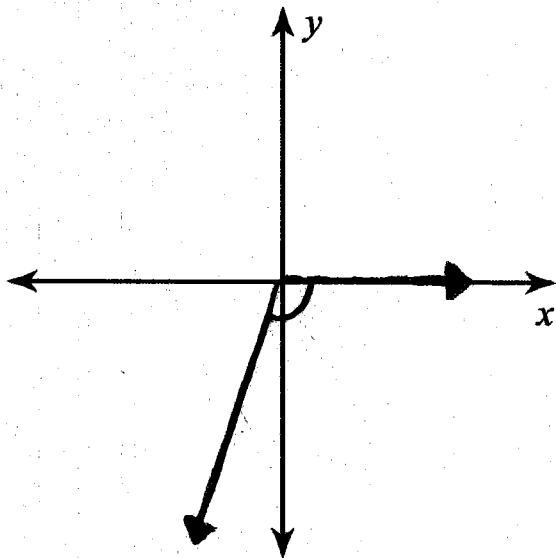
13.  $\cos(300^\circ)$

$$\boxed{\frac{\sqrt{3}}{2}}$$

15.  $\tan(210^\circ)$

$$\frac{\frac{1}{2}}{\frac{\sqrt{3}}{2}} = \frac{1}{2} \cdot \frac{2}{\sqrt{3}} = \frac{1}{\sqrt{3}} = \boxed{\frac{\sqrt{3}}{3}}$$

17. Draw a **-110°** angle in standard position.



10.  $\sin(270^\circ)$

$$\boxed{-1}$$

12.  $\sin(-135^\circ)$

$$\boxed{\frac{-\sqrt{2}}{2}}$$

14.  $\sin(-315^\circ)$

$$\boxed{\frac{\sqrt{2}}{2}}$$

16.  $\tan(90^\circ)$

$$\frac{1}{0} = \boxed{\text{undefined}}$$

18. Find one positive and one negative angle co-terminal with this angle.

$$\underline{250^\circ}$$

$$\underline{-470^\circ}$$

