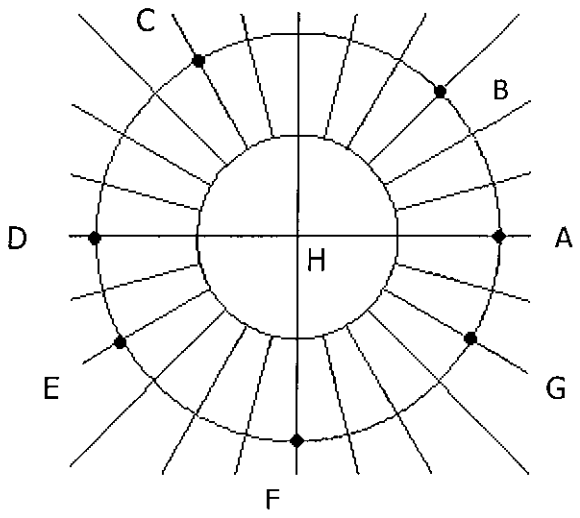
Unit Circle Review/Polar Coordinates (Homework)

Use the unit circle below to answer the following.



1. At which point(s) shown is the cosine negative?

_____

2. What is angle, in degrees, is $\angle AHC$?

_____

3. Find sin (G).

_____

4. Give the coordinates of E.

_____

5. What is the angle between 0 and 2π, in radians, of $\angle AHG$?

_____

6. For which point labeled in the circle does sine=cosine? Give the degree and radian measure of this angle.

_____

7. Which point labeled on the circle corresponds to the angle of $-\frac{5\pi}{6}$? _____

8. Which point labeled on the circle corresponds to the angle $\frac{7\pi}{2}$? _____

9. On the graph, plot the following and label:

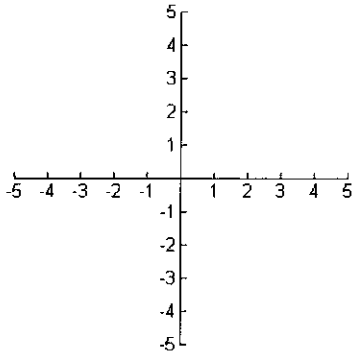
A) $\left(-1,-\frac{\pi}{3}\right)$

B) $\left(2,\frac{2\pi}{3}\right)$

C) $(4,3\pi)$

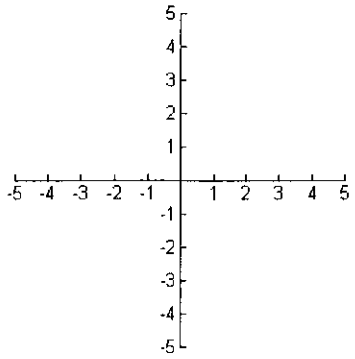
D) r = 3

E) $\theta=\frac{\pi}{2}$



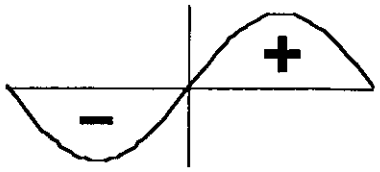
10. On the graph, plot $r=1-2\cos\theta$ using the following points:

r	θ
	0
	$\frac{\pi}{3}$
	$\frac{\pi}{2}$
	π
	$\frac{4\pi}{3}$
	$\frac{3\pi}{2}$



	$\frac{5\pi}{3}$
	2π

WHAT IS THE TITLE OF THIS PICTURE?



Match each expression with its value.

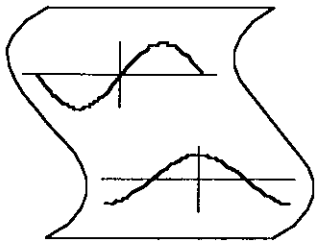
1) $\sin\frac{\pi}{4}=$	2) $\cos\frac{\pi}{3}=$	3) $\tan\frac{\pi}{6}=$	4) $\tan\pi=$	5) $\sin\frac{\pi}{2}=$
6) $\sin\frac{5\pi}{4}=$	7) $\tan\frac{5\pi}{4}=$	8) $\tan\frac{\pi}{4}=$	9) $\sin\frac{5\pi}{6}=$	10) $\cos\frac{\pi}{2}=$
11) $\sin\frac{2\pi}{3}=$	12) $\cos\frac{5\pi}{3}=$	13) $\cos\frac{2\pi}{3}=$	14) $\tan\frac{3\pi}{2}=$	15) $\cos\pi=$
16) $\sin\pi=$	17) $\cos\frac{7\pi}{6}=$	18) $\tan\frac{5\pi}{3}=$	19) $\sin 0=$	20) $\cos\frac{7\pi}{4}=$

Values.

A. $-\frac{\sqrt{3}}{3}$	E. $\frac{\sqrt{3}}{3}$	G. $-\frac{1}{2}$	I. $\frac{1}{2}$	L. $-\frac{\sqrt{2}}{2}$	M. -1	N. 1
O. $-\frac{\sqrt{3}}{2}$	P. $\frac{\sqrt{3}}{2}$	Q. $\sqrt{3}$	R. undefined	S. 0	U. $\frac{\sqrt{2}}{2}$	±. $-\sqrt{3}$

11	6	20	10		17	14	15	12	5	1	19	16	2	8	3	(	18	4	9	13	7	)

WHAT IS THE TITLE OF THIS PICTURE?



Match each equation with a solution where $0 \le \theta < 2\pi$.

1) $\sin\theta=\frac{1}{2}$	2) $\cos\theta=\frac{\sqrt{2}}{2}$	3) $\tan\theta=\frac{\sqrt{3}}{3}$	4) $\tan\theta=-\sqrt{3}$
5) $\sin\theta=1$	6) $\cos\theta=-\frac{\sqrt{3}}{2}$	7) $\tan\theta=-1$	8) $\sin\theta=-1$

Match each expression with the angle θ as defined by the inverse trig function.

9) $\sin^{-1}\left(\frac{1}{2}\right)=$	10) $\cos^{-1}\left(\frac{\sqrt{2}}{2}\right)=$	11) $\tan^{-1}\left(\frac{\sqrt{3}}{3}\right)=$	12) $\tan^{-1}(-\sqrt{3})=$
13) $\sin^{-1}(1)=$	14) $\cos^{-1}\left(-\frac{\sqrt{3}}{2}\right)=$	15) $\tan^{-1}(-1)=$	16) $\sin^{-1}(-1)=$

Values.

A. $\frac{5\pi}{6}$	E. $\frac{\pi}{2}$	H. $-\frac{\pi}{4}$	I. $\frac{\pi}{4}$	G. $-\frac{\pi}{2}$	N. $\frac{3\pi}{2}$	S. $\frac{\pi}{6}$
E. $-\frac{\pi}{3}$	I. $\frac{\pi}{6}, \frac{5\pi}{6}$	N. $\frac{\pi}{6}, \frac{7\pi}{6}$	P. $\frac{5\pi}{6}, \frac{7\pi}{6}$	S. $\frac{\pi}{4}, \frac{7\pi}{4}$	T. $\frac{3\pi}{4}, \frac{7\pi}{4}$	U. $\frac{2\pi}{3}, \frac{5\pi}{3}$

14		11	1	8	13	(	9	10	16	3	)	4	6		2	15	5	12	7