

Name: _____ Period: _____

PC5-Review (The first question on the test will be to complete the entire unit circle)

1) Convert from degrees to radians. Express your answer as a multiple of π . 1690°	2) Convert from DMS to decimal degrees. 17°33'42"	3) Convert from decimal degrees to DMS. 29.411°	4) Convert from radians to degrees. $\frac{-27\pi}{5}$
5) Graph <u>one cycle</u> of the function $f(x)$. $f(x) = 4 \cos\left(2\left(x + \frac{\pi}{2}\right)\right) - 3$			
6) Graph <u>one cycle</u> of the function $g(x)$. $g(x) = -5 \cos\left(\frac{1}{5}(x - 5\pi)\right)$			
7) Graph <u>one cycle</u> of the function $h(x)$. $h(x) = -4 \sin\left(3\left(x + \frac{\pi}{6}\right)\right) - 3$			

8) Given $\sin \theta = \frac{4}{7}$ and $\tan \theta < 0$, Draw a reference triangle and find the value of all six trig functions.

$\sin \theta =$	$\csc \theta =$
$\cos \theta =$	$\sec \theta =$
$\tan \theta =$	$\cot \theta =$

9) Given $\cos \theta = \frac{2}{3}$ and $\csc \theta < 0$, Draw a reference triangle and find the value of all six trig functions.

$\sin \theta =$	$\csc \theta =$
$\cos \theta =$	$\sec \theta =$
$\tan \theta =$	$\cot \theta =$

10) Find an equation of a negative cosine function with amplitude=6, period= π , passing through the point $(\frac{2\pi}{3}, 4)$.

11) Find an equation of a positive cosine function with amplitude=3, period= 6π , passing through the point $(\frac{19\pi}{13}, 32)$.

Find the exact value of each expression below.

12) $\sin \frac{\pi}{6}$

13) $\cos \left(-\frac{5\pi}{4}\right) - \cos \frac{3\pi}{4}$

14) $5 \tan(330^\circ) - \sin \left(\frac{\pi}{2}\right)$

15) $\cot \left(\frac{7\pi}{6}\right)$

16) The minute hand of a clock is 6 inches long. How far does the tip of the minute hand move in 15 minutes? How far does it move in 25 minutes? Round the answer to two decimal places.