Pre-Calc WS
Section 4.7 Practice

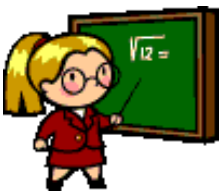
Name DiMarco

Without using your calculator, evaluate the following. (Draw a picture if needed.)

1) $\cos^{-1}\left(\frac{\sqrt{2}}{2}\right) = \boxed{\frac{\pi}{4}}$

cos
+
n

2) $\cos^{-1}\left(-\frac{\sqrt{3}}{2}\right) = \boxed{\frac{5\pi}{6}}$



3) $\tan^{-1}(-1) = \boxed{-\frac{\pi}{4}}$

cot
a
n

4) $\cos\left(\tan^{-1}\left(\frac{\sqrt{3}}{3}\right)\right) = \cos(30^\circ) = \boxed{\frac{\sqrt{3}}{2}}$

$\frac{1}{\sqrt{3}}$

5) $\cancel{\arcsin}\ \sin^{-1}\left(\sin\left(\frac{2\pi}{3}\right)\right) = \sin^{-1}\left(\frac{\sqrt{3}}{2}\right) = \boxed{\frac{\pi}{3}}$

6) $\cos^{-1}\left[\cos -\frac{\pi}{4}\right] = \cos^{-1}\left(\frac{1}{\sqrt{2}}\right) = \boxed{\frac{\pi}{4}}$

7) $\sin\left(18\cos^{-1}\frac{1}{2}\right) = \sin\left(18 \cdot \frac{\pi}{3}\right)$

ref $60 = \frac{\pi}{3}$

$= \sin(6\pi)$

$= \boxed{0}$

8) $\tan\left[12\sin^{-1}\left(-\frac{1}{2}\right)\right] = \tan\left[12 \cdot \frac{\pi}{6}\right]$

$= \tan[2\pi]$

ref $30^\circ = \frac{\pi}{6}$

$= \boxed{0}$

9) $\sec\left(\cancel{\arccos}\ \cos^{-1}\frac{1}{2}\right) = \sec(60^\circ)$

$= \boxed{2}$

10) $\csc\left(\tan^{-1}1\right) = \csc(45^\circ)$

$= \boxed{\sqrt{2}}$

Use your calculator to evaluate the following. Round your answer to the nearest hundredth.

11) $\cot^{-1}(-6.1)$ Q2

$\tan^{-1}\left(\frac{1}{6.1}\right) = .16$

$\pi - .16 = \boxed{2.98}$

12) $\cos^{-1}\left(\frac{2}{3}\right)$ Q1

$= \boxed{.84}$

13) $\sec^{-1}(1.99)$ Q2

$\cos^{-1}\left(\frac{1}{1.99}\right)$

$= \boxed{1.04}$

14) $\tan^{-1}\left(\frac{5}{7}\right)$ Q1

$= \boxed{.62}$