M126 Worksheet 6.1 - Inverse Circular Functions Name_____

1) Find the exact value of the real number y.

a) $y = \sin^{-1}\left(\frac{\sqrt{3}}{2}\right)$ b) $y = \text{arcsec}(1)$ c) $y = \arctan(1)$

2) Use a calculator to give the value to the nearest **degree**.

a) $\theta = \cos^{-1}(.8910)$ b) $\theta = \tan^{-1}(2.2460)$

3) Use a calculator to give the **real number value**.

a) $y = \sin^{-1}(-.4848)$ b) $y = \text{arcsec}(2.8842912)$ c) $y = \cot^{-1}(2.5181552)$

4) Evaluate the expression.

a) $\arccos\left(\cos\frac{\pi}{2}\right)$ b) $\cos\left(\arcsin\frac{1}{4}\right)$

5) Write $\tan\left(\cos^{-1}\frac{u}{3}\right)$ as an algebraic expression in u, $u > 0$.

Answer Key
Testname: WORKSHEET 6.1 - INVERSE TRIG FUNCTIONS

1) a) $\frac{\pi}{3}$ b) 0 c) $\frac{\pi}{4}$

2) a) 27° b) 66°

3) a) –.5061 b) 1.2167 c) .3780

4) a) $\frac{\pi}{2}$ b) $\frac{\sqrt{15}}{4}$

5) $\frac{\sqrt{9 - u^2}}{u}$