

Math 11022

Trigonometry

Spring 2015

Quiz 6 1.7

Instructor: Matt Alexander

Name: key

Quiz Score: _____/10

1. What is the domain and range of $\arccos(x)$. (2pts)

Domain: $[-1, 1]$

Range: $[0, \pi]$

2. Evaluate the following without a calculator. Give an exact answer in radians. (5pts)

$$\cos^{-1}\left(-\frac{\sqrt{2}}{2}\right) = \underline{\frac{3\pi}{4}}$$

$$\sin^{-1}\left(\frac{1}{2}\right) = \underline{\frac{\pi}{6}}$$

$$\arcsin(\sin(2\pi)) = \underline{0}$$

3. Find the exact value of $\cos(\tan^{-1}(2))$. (3pts)

Let $u = \arctan^{-1}(2)$ then $\tan u = 2$ so

$$\text{so } \cos(u) = \frac{\text{adj}}{\text{hyp}} = \frac{1}{\sqrt{5}} \text{ or } \frac{\sqrt{5}}{5}$$

