

Name: _____

Inverse Trigonometric Functions

Exercise 1: Use the properties of inverse trigonometric functions to evaluate the expression.

1) $\cos(\cos^{-1} 0.1)$

2) $\cos^{-1}(\cos \pi)$

3) $\sin^{-1}\left(\sin \frac{\pi}{3}\right)$

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

5) $\sin^{-1}\left(\sin \frac{5\pi}{6}\right)$

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

Exercise 2: Find the exact value of the expression. (Hint: sketch a right triangle.)

7) $\sin\left(\arctan \frac{3}{4}\right)$

8) $\sec\left(\arcsin \frac{4}{5}\right)$

9) $\cos(\tan^{-1} 2)$

10) $\sin\left(\cos^{-1} \frac{\sqrt{5}}{5}\right)$

11) $\cos\left(\arcsin \frac{5}{13}\right)$

12) $\csc\left[\arctan\left(-\frac{5}{12}\right)\right]$

13) $\sec\left[\arctan\left(-\frac{3}{5}\right)\right]$

14) $\tan\left[\arcsin\left(-\frac{3}{4}\right)\right]$

15) $\sin\left[\arccos\left(-\frac{2}{3}\right)\right]$

16) $\cot\left(\arctan \frac{5}{8}\right)$