

Last Name: SOLUTIONS

First Name: _____

Student ID: _____

Quiz 3 (A)

Question 1. Evaluate the following:

(a) (1 mark) $\cos\left(-\frac{3}{2}\pi\right) = 0$

(b) (1 mark) $\sin\left(-\frac{4}{3}\pi\right) = \frac{\sqrt{3}}{2}$

(c) (1 mark) $\sec\left(-\frac{\pi}{6}\right) = \frac{1}{\cos(-\pi/6)} = \frac{2}{\sqrt{3}}$

(d) (1 mark) $\arcsin\left(\frac{-1}{\sqrt{2}}\right) = \arcsin\left(-\frac{\sqrt{2}}{2}\right) = -\pi/4$

(e) (2 marks) $\arctan\left(\tan\left(\frac{4\pi}{3}\right)\right) = \arctan(\sqrt{3}) = \pi/3$

Question 2. (4 marks) Set up a table of values (with at least 6 values) to estimate the following limit if it exists:

$$\lim_{x \rightarrow 1} (2x^2 - 1)$$

x	0.9	0.99	0.999	1.001	1.01	1.1
$f(x)$	0.62	0.9602	0.996002	1.004002	1.0402	1.42

$$\therefore \lim_{x \rightarrow 1} (2x^2 - 1) = 1$$