Problem 1. Let $\theta \in [\pi/2, \pi]$ be an angle.

(a) Suppose that $\sin \theta = 8/17$. Compute the value of the five other trigonometric functions.

(b) Explain why $\sin^{-1}(\sin \theta) \neq \theta$. Hint: don't try to compute θ.

Problem 2. Consider the function $f(x) = 2x - 4$.

(a) What is the average rate of change from $x = 3$ to $x = 5$? From $x = 3$ to $x = 3.5$?

(b) What do you think is the instantaneous rate of change at $x = 3$? Justify your guess.