# QUIZ 3

**Time: 10min**

1. Explain why the following statement is false.

$$\int_0^\pi (1 + \sin x)^2 \, dx = 0.$$

2. The average value of a function $f(x)$ equals 6 for $0 \le x \le 1$, and equals 3 for $1 \le x \le 3$. What is the average value of $f(x)$ for $0 \le x \le 3$.

*Each problem is worth 5 pts.*