# Math 182      **Quiz** 11      **Name:** _____

**October 18, 2004**

**Show all work for credit.**

1. A demand function is given by $d(x) = 1000 - 10x - x^2$. Find the consumer surplus if 20 units of the commodity are available.

2. Find the surface area of the solid of revolution given by rotating the function $f(x) = \sin x$ about the $x$-axis on the interval $0 \leq x \leq \pi/3$.