

# Take-Home Quiz 7

Math 131 Section 22

Due Monday, November 28, 2005

I wish you a wonderful Thanksgiving!

**Problem 1. (4 points).** Use differentials to estimate  $(1.02)^{20}$ .

**Problem 2. (4 points).** I give you an orange with a diameter of 4 inches. The rind is 0.2 inches thick. Using differentials, estimate the volume of the rind.

**Problem 3. (4 points).** Recall that  $\sqrt[4]{81} = 3$ . Use differentials to estimate  $\sqrt[4]{80}$ .