Math 120: Calculus 2 **Sample Lab Test on Excel** Name: _____
Instructor: Ramin Naimi Tuesday, 15 Apr 2008

Closed book. Closed notes. No Calculators.

Please write very legibly.

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1. Let $S_n = \sum_{k=1}^{n} \frac{\sin(7k)}{k}$. Use Excel to find all of $S_1, S_2, \cdots, S_{20,000}$. Then write your answers to each of the following, with as many digits as Excel provides:

   S_{10} =? S_{50} =? S_{100} =? $S_{20,000}$ =?

   SOLUTION:

   S_{10} =? 1.155051703

   S_{50} =? 1.211135253

   S_{100} =? 1.22619433

   $S_{20,000}$ =? 1.212389399

2. Find $S_1 + S_2 + \cdots + S_{20,000}$ and write your answer here, with as many digits as Excel provides:

   SOLUTION:

   24247.65728

3. Use Excel to find $e^{-\frac{99+\ln(0.2)}{5\tan^2(18)}}$. Write your answer in decimal notation (not "E notation").

   SOLUTION:

   (Excel gives 2.88474E-07, but the problem wants the following:)

   0.000000288474