Math 250-A02 **Winter 2006** **Guide for Test 1**

The first test is in class on Friday 20 January.
Here are some sample questions, so that you have an idea of what to expect.

1. (a) This guy that you know is worried that he does not fit in here because he does not have piercings like everybody else seems to. He starts asking all his friends that he runs into on campus how many piercings they have, and recording the results.

   What is the statistical population?
   the population unit?
   the sample?
   Is the data qualitative?
   numerical?
   continuous?
   discrete?
   anecdotal?

   (b) You need to simulate the results of rolling three ordinary (six-sided) dice and adding the result together.
   Use the random number table below to get your results. Explain what you did.

6275	4804	5890
0569	2576	8559
1957	6383	7105
4586	0912	8459

   (c) You roll three ordinary (six-sided) dice and add the result together.
   What is the probability that your total is 5? Explain how you obtain your answer.

2. Somebody counted something and collected the data:

$$2 \quad 1 \quad 2 \quad 9 \quad 12 \quad 12$$

   (a) Make a relative frequency distribution table.
   (b) Compute the median, the first quartile, the third quartile, and the 60th percentile.
   (c) Make a boxplot.

3. Somebody measured something and collected the data:

$$3.0 \quad 4.2 \quad 5.1 \quad 3.5 \quad 0.1 \quad 3.5 \quad 5.5$$

   (a) Make a dot diagram.
   (b) Using the intervals $[0, 1)$, $[1, 2)$, $[2, 3)$, $[3, 4)$, $[4, 5)$, and $[5, 6)$, construct a relative frequency distribution table and make a histogram.
   (c) Compute the mean and standard deviation. Mark the mean on your histogram.