

QR 26: Choice and Chance  
The Mathematics of Decision Making

**Unit I Activity**

**Name:** \_\_\_\_\_

1. Do you think the population of the country Turkey is more or less than 80 million?  
What is your estimate of the population of Turkey?

More: \_\_\_\_\_      Less: \_\_\_\_\_      Estimate: \_\_\_\_\_

2. Which one of the following two strategies would you choose for a distressed firm with 600 jobs at stake.

\_\_\_\_\_ Program X would lead to 400 firings.

\_\_\_\_\_ Program Y would have  $\frac{1}{3}$  probability of no firings and  $\frac{2}{3}$  probability that all 600 would be fired.

3. In four pages of a novel (about 2,000 words), how many words would you expect to find that have the form                              *n* (seven-letter words that have the letter *n* in the sixth position)? Indicate your best guess by circling one of the values below:

0      1-2      3-4      5-7      8-10      11-15      16+

4. Which of the following letter combinations do you like best?

\_\_\_\_\_ YZX      \_\_\_\_\_ WXY      \_\_\_\_\_ XYW      \_\_\_\_\_ YWZ      \_\_\_\_\_ ZYX

5. Which of the following two student records should have the higher class rank?  
Describe and show your calculation for rating students based on their grades.

\_\_\_\_\_ Record x has 1 A, 12 A-, 12 B-, and 7 C-.

\_\_\_\_\_ Record y has 19 B+, 1 B, and 12 C+.