**Probabilistic Numeracy Subtest**

1. Which of the following numbers represents the biggest risk of getting a disease?

a. 3 in 49

\*b. 1 in 9

c. 2 in 37

d. 1 in 75

2. Imagine that we roll a fair, six-sided die 200 times. Out of 200 rolls, how many times do you think the die would come up as an odd number? [100]

3. A particular state lottery has as its lowest winning prize the award of a free ticket to the next lottery. 6% of all lottery players win this prize in each lottery draw. If 100,000 people played the lottery this week, how many of them would win the prize of a free ticket? [6000]

4. For a person over age 60, the chances of getting shingles at some time in their life is .06. Out of 30,000 people, over age 60, about how many of them can be expected to get shingles? [1800]

5. If you flipped a fair coin twice, what is the probability that it would land “heads” both times? \_\_\_\_ percent [.25 or 25%]

6. On KATU News in Seattle one day, the weatherperson said that “there is an 80% chance of rain tomorrow”. What does this statement mean?:

a. it is certain to rain tomorrow

b. it will rain tomorrow in 80% of the Seattle region

c. it is a tossup whether it will rain tomorrow or not

\*d. it will rain on 80% of the days like tomorrow

e. it will rain tomorrow 80% of the time

7. A nonsmoker’s chance of getting a disease is 6%, and a smoker’s chance is 3 times that of a nonsmoker. What is a smoker’s chance of getting the disease? \_\_\_\_\_ [18%]

8. Imagine that an unvaccinated person has a 10% chance of getting the flu and that the flu vaccine is 80% effective in preventing the flu. What are the chances that a person who has had the vaccine will still get the flu? \_\_\_\_\_\_ [2%]

9. A weatherperson’s forecast was that there was a 30% chance of rain on each of 10 different days during a two-month period. The strongest evidence that the weatherperson’s forecasts were accurate would be that it rained on \_\_\_\_\_\_ of these 10 days? [3]

**CART Scoring:**

The raw number of correct on this subtest is also the number of points on the CART.