Name: _____ **Date:** _____

A Chance at Monte Carlo Activity — Post-Quiz Assessment

1. What is the significance of a geometrical constant? Give an example.

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2. Quantities are often approximated in experimental science? True OR False (please circle)

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3. Explain the idea of using simulated models for experiments:

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4. Suppose you want to automatically assign numbers to baseball players by randomly drawing 9 numbers with replacement from a large range of numbers. Each team needs 9 numbers, and within a team, all the numbers must be unique. If the range is too small (say 1 through 30), then there is a large chance that you will get repeated numbers within a team.

   Can you think of a way of testing to see what range of numbers almost never yields repeated player assignments?

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5. The phrase “uniformly random” means:
   a. scattered everywhere
   b. occurring with equal probability anywhere
   c. scattered with equal spacing

6. A simulation is
   a. thinking of how an event will happen
   b. conducting an experiment
   c. artificially modeling and enacting an event

7. The number π is
   a. 3.141592.....
   b. the naturally occurring constant relating any circle's radius to other geometrical features (circle length, area, etc.)
   c. cannot be written as a simple fraction
   d. all of the above

How do you agree with these statements:	Strongly Agree	Agree	Don't Know	Disagree	Strongly Disagree
Computers are useful for numerical calculation.					
Any mathematical problem can be solved with the right formula.					
We can use random sampling for insight into complex problems.					