

Name: _____ Date: _____

A Chance at Monte Carlo Activity — Pre-Quiz Assessment – **Answers**

1. List a few ways that engineers use computers and computer programming:

Engineers harness computers for numerical computation and experimental simulation, among other things. A common pattern of usage is to perform numerical processing to analyze and understand experimental data, followed by simulation to test a predictive hypothesis or model.

2. In the field of mathematics, what is π (pi)?

Pi (π) is the ratio of the circumference of a circle to its diameter.

3. What does it mean to model a phenomenon?

A model describes a phenomenon in terms of simple parts. For example, the dynamics of a game of pool can be predicted somewhat by the physical model of elastic collisions between objects with varying amounts of mass and energy. The phenomenon has been stripped down to a few simple parts: energy, conservation of energy, and the means of transferring kinetic energy from one massive object to another.

How do you agree with these statements:	Strongly Agree	Agree	Don't Know	Disagree	Strongly Disagree
In mathematics, we always calculate exact numbers.					X
Scientists always conduct experiments physically (by hand).					X
Random information can help us solve problems.	X				
Computer programming is not useful for scientists.					X