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AP STATISTICS – MS. KLIMCZUK

Simulating a Dice Game

The game of 21 can be played with an ordinary 6-sided die. Competitors each roll the die repeatedly, trying to get the highest total less than or equal to 21. I your total exceeds 21, you lose.

Suppose your opponent rolled an 18. Your task is to try and beat him by getting more than 18 points without going over 21. How many rolls do you expect to make, and what are your chaces of winning?

Questions:

What is a component?

How will you simulate the components?

How will you combine components to model a trial? What is the response variable?

How would you use the following random digits to run trials?

91129 58757 69274 92380 82464 33089

Now let’s run 30 trials. Write down all of your outcomes. What are your conclusions?