D*. Note that while serving as the TV-color-commentator during a Utah Jazz basketball game, Matt Harping suggested that because a player who had just missed one foul shot would likely make the next because the probability of his making a foul shot is 70%.

Assuming that $p(A) = 0.70$ where A is the event that the player shoots a foul shot and makes it, assess the veracity of Matt's declaration. In your assessment, make reference to the independence or dependence of two events (e.g., the event that a player makes the first of two foul shots and the event that the player makes the second of two foul shots).

Express your assessment in two paragraphs and upload the resulting pdf document on the appropriate Canvas assignment link.

Sample critique:

Of course our probability theory is directed at random variables (We will soon be defining what we mean by a *random variable.*) and sample spaces with random outcomes. Players' recent histories of shooting foul shots seem to be tenable predictors of how well they will shoot foul shots in the future. Psychologically, it seems that players' emotions would be influenced by whether they've recently missed or made a shot. One player might learn a lesson by having missed the first of two foul shots that she/he/they applies to improve the performance on the second. Or maybe, the player is more likely to miss the second because she/he/they is more worried about missing the second.

On the other, under the assumption that the two events of making the first and making the second are independent, then it makes sense to compute the product of the player's foul-shot success percentage. In this case that is $(0.70)^2 = 0.49 < 0.50$. What do you think of that, Matt?

F*. From the Video Page of *Canvas*, view with comprehension "The Monty Hall Problem Explained ." Then write a paragraph that addresses the following question: How, if at all, does the *Monty Hall problem* relate to *Bayes' theorem* and *Bayesian* statistics?

Sample paragraph:

Solving the Monty Hall problem motivates us to attend to the influences of measurement results that come to light during the problem-solving process. Yes, make a plan but be open to revising that plan continually as conditions may cause us to rethink our sample spaces. Yes, the Monty Hall problem reminds us of value using Bayesian statistics (i.e., stay focused on the the question at hand rather than only blindly following a previously prescribed algorithm.
