Name: _____

Problem 1: An experiment consists of watching the Saints games on the next two Sundays. Of interest is the outcome of each game (win or loss).

a. List the sample space of possible outcomes. [2 points]

b. Let A be the event that there is at least one win. Find P(A). [1 point]

c. Let B be the event that the Saints win their first game. Find P(B). [1 point]

d. Let C be the event that the Saints lose one game. Find P(C). [1 point]

e. Are A and B independent? Why or why not? [2 points]

f. Are B and C mutually exclusive? Why or why not? [2 points]

Problem 2: Determine whether the following events are independent or dependent. [1 point each]

a. Voting and who is the president of the United States in 2021

b. Driving to work and spending time with your significant other

Problem 3: Let $(A) = \frac{1}{12}$, $P(B) = \frac{1}{7}$, and $P(A\ and\ B) = \frac{1}{84}$.

a. Find $P(B|A)$. [3 points]

b. Are A and B independent? Why or why not? [2 points]

This assignment will be recorded as a Written Homework grade out of 16 points.
Submissions may be typed or handwritten and submitted as a picture/PDF.