In-Class Worksheet Discrete Math & Functional Programming— CSCI 054— Fall 2024 Instructor: Osborn

If you draw two cards from a perfectly-shuffled deck of cards, what is the probability that:

• both cards are hearts?

• the two cards have different suits?

• the two cards sum to 3 (i.e. you draw an Ace and a 2)

I randomly choose a number $1, 2, \ldots, 10$. Consider the following 3 events. Are any pair of them independent?

- A: I choose an odd number
- B: I choose a prime number
- C: I choose a number (strictly) less than 5