

Homework Set 2

DUE: FEB 10, 2020 (AT THE BEGINNING OF CLASS)

To be handed in:*Please write your solution to Problems 1 and 2 on a single sheet of paper!*

1. A building has 20 floors above the ground floor. Four people walk into this building on the ground floor, on their way to some floor above the ground. When they reach the elevator, each person only presses the button of the floor they are going to. What is the probability that 4 buttons for consecutive floors are pressed?
2. A standard deck of cards has 52 cards, with 13 cards of each one of the 4 different suits \clubsuit , \diamondsuit , \spadesuit , \heartsuit . Suppose you are dealt 13 cards from this deck, at random.
 - a) What is the probability that all your cards are of the same suit?
 - b) What is the probability that none of your cards are of a given suit?