Question 1.3.3

Six new employees, two of whom are married to each other, are to be assigned six desks that are lined up in a row. If the assignment of employees to desks is made randomly, what is the probability that the married couple will have nonadjacent desks?

Solution: Let X be a Random variable such that

$$X = \begin{cases} 1 & \text{sitting adjacent} \\ 0 & \text{not sitting adjacent} \end{cases} \quad (1)$$

Total posiible seating arrangement = 6!