

Lab Challenge 3

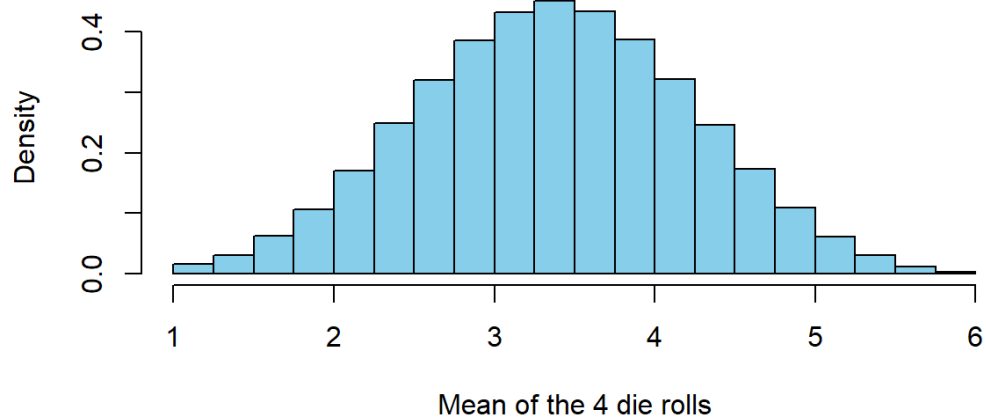
Part 1:

- a. The probability that the student has brown eyes and a car is: 0.4576271
- b. Probability that a randomly selected student who has brown eyes owns a car is: 0.627907
- c. The probability that two randomly selected students wear glasses is: 0.3278784

Part 2:

a.

**Histogram of X (mean of 4 die rolls)**

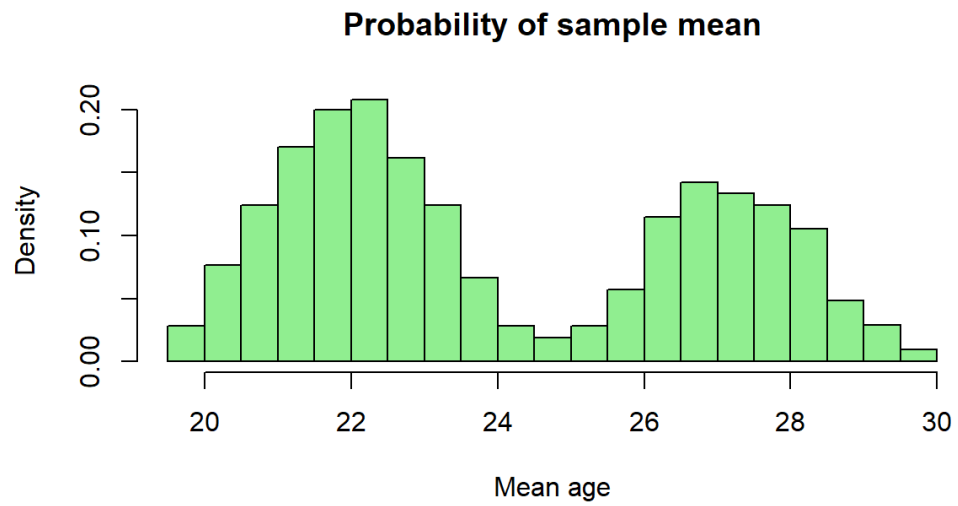


- b. The most likely value of  $\bar{X}$  is: 3.5
- c. The probability that  $3 \leq \bar{X} \leq 4$  is: 0.521818

Part 3:

- a. The probability that the randomly selected student is 22 or younger: 0.5
- b. Probability that all four students are 22 or younger is: 0.02380952

c.



- d. The probability that mean age of students  $\bar{X} \leq 22$  is: 0.300057
- e. The probability that all four students have different ages is: 0.666398