X = max of two die

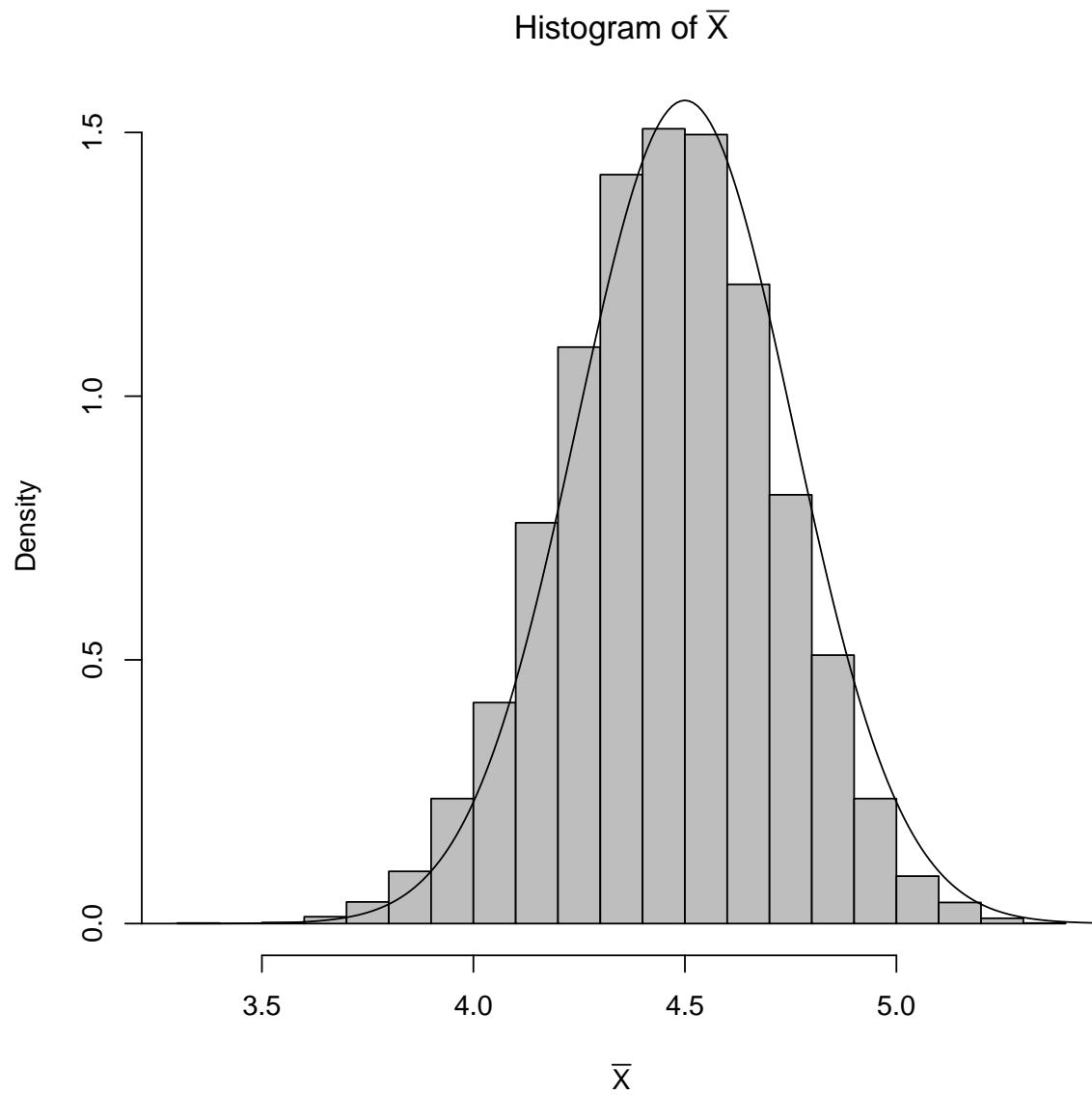Figure 1: Probability distribution for max of two dice

Histogram of $\overline{X}$

Figure 2: Distribution of the sample mean