

7.2 Probability Theory

7.2 pg 467 # 3

Find the probability of each outcome when a biased die is rolled, if rolling a 2 or rolling a 4 is three times as likely as rolling each of the other four numbers on the die and it is equally likely to roll a 2 or a 4.

7.2 pg 467 # 23

What is the conditional probability that exactly four heads appear when a fair coin is flipped five times, given that the first flip came up heads?

7.2 pg 467 # 27

Let E and F be the events that a family of n children has children of both sexes and has at most one boy, respectively. Are E and F independent if

- a) $n = 2$?
- b) $n = 4$?

7.2 pg 467 # 29

A group of six people play the game of “odd person out” to determine who will buy refreshments. Each person flips a fair coin. If there is a person whose outcome is not the same as that of any other member of the group, this person has to buy the refreshments. What is the probability that there is an odd person out after the coins are flipped once?