

### 4.2.1: Exercises

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1. Determine which of the following scenarios only have two outcomes:
  - a. Flipping a coin
  - b. Attempting to score on a penalty kick in soccer
  - c. Distance to the nearest landfill
  - d. Finding a political tweet
  
2. If you are flipping a biased coin that lands on tails 72% of the time, find the probability that you will get your first “tails” on the fourth flip. Round your answer to four decimal places.
  
  
  
  
  
  
  
  
  
  
3. You are rolling a fair die. What is the probability that you will roll your first 6 on the eighth try? Round your answer to four decimal places.
  
  
  
  
  
  
  
  
  
  
4. A soccer player is practicing their penalty kicks. They have a 0.4 success rate. What is the probability that they make a goal for the first time on the fifth attempt. Round your answer to four decimal places.
  
  
  
  
  
  
  
  
  
  
5. In the board game Monopoly, one way to get out of jail is to roll doubles. Find the probability that it takes three rolls to get out of jail. Round your answer to four decimal places.