

Practice 2-6

Example Exercises

Example 1

Use the random number table for Exercise 1.

1. The batter has a 0.300 average, which means he got a hit 30% of the times he was at bat. Use a simulation to find the probability that he does not get a hit in any of his next five times at bat.
 - a. Use 1, 2, and 3 for hits and the other numbers for no hits. Use the first ten groups to find the probability of no hits in five times at bat.
 - b. Repeat, using the first twenty groups.
 - c. Repeat, using the first thirty groups.
 - d. Repeat, using the first forty groups.
 - e. Which estimate is probably more accurate? Explain.

80671	95710	56150	34567
34333	45334	71253	70774
27872	62654	43240	31674
90631	15759	28009	96281
76261	75704	76461	39345
39991	73848	53443	58506
57163	84535	05739	35717
06549	50092	32609	86608
04398	40754	27595	85122
24506	16125	22398	28328

Example 2

2. You flip three coins at the same time.
 - a. List the sample space.
 - b. What is the probability of getting three heads?
 - c. What is the probability of getting exactly one head?
3. There are three children playing follow the leader.
 - a. List the sample space for the order in which they run past you. Use A, B, and C for their names.
 - b. What is the probability that C will be last?

Example 3

4. Suppose you choose a marble at random from a container that has 64 marbles that are identical except for color. There are 16 red ones, 20 blue ones, 8 black ones, 8 white ones, 10 green ones, and 2 yellow ones.
 - a. Find $P(\text{the marble is black})$
 - b. Find $P(\text{the marble is not red})$
 - c. Find $P(\text{the marble is green})$
 - d. Find $P(\text{the marble is not blue or black})$