Strategy Focus: Make an Organized List

Solve each problem. Show your work.

1. Six books are on a shelf. Each book is about a different animal: a bear, a giraffe, a lion, a zebra, a monkey, and an elephant. Mark chooses 2 books without looking. **What is the probability that he chooses the lion book and the zebra book?**

   List all the possible ways to choose two books. Use letters for the animals.

   BG, BL, BZ, ____BM____ , ____BE____

   GL, GZ, ____GM____ , ____GE____

   LZ, ____LM____ , ____LE____

   ZM, ____ZE____

   ME

   There is ____1____ way to choose the lion book and the zebra book.

   There are ____15____ different ways to choose two books.

   Answer ___The probability of choosing the lion book and the zebra book is $\frac{1}{15}$.___

   . . . .

2. Five marbles are in a bag: blue, yellow, green, red, and purple. Without looking, Suri takes a marble from the bag and puts it on the table. Then she reaches into the bag without looking and chooses another marble. **What is the probability she chooses the blue marble first and then the yellow marble?**

   List all the ways to choose two marbles without replacing the first.

   Answer ___The probability is $\frac{1}{20}$.___

3. Puppies run up a training ramp, one at a time. There are two brown puppies and two black puppies. **What is the probability that the first two puppies to run up the ramp are brown puppies?**

   Answer ___The probability that the first two puppies are brown is $\frac{2}{12}$, or $\frac{1}{6}$.___

Describe Look back at Problem 3. How did you use the strategy *Make an Organized List*?

Sample Answer: I made a list of the ways that one of the puppies could be first. Next, I listed the ways that the other puppies could be second. Then I looked for all the ways that the two puppies would be brown.