

## Practice 9-3

## Sample Spaces

**Make a table to show the sample space and find the number of outcomes. Then find the probability.**

1. A theater uses a letter to show which row a seat is in, and a number to show the column. If there are eight rows and ten columns, what is the probability that you select a seat at random that is in column 1? \_\_\_\_\_

**Make a tree diagram. Then find the probability.**

2. A coin is tossed three times.
  - a. Make a tree diagram that shows all the possible outcomes of how the coin will land.
  - b. Find the probability that the coin will land heads up all three times or tails up all three times. \_\_\_\_\_

**Use the counting principle.**

3. A pizza company makes pizza in three different sizes: small, medium, and large. There are four possible toppings: pepperoni, sausage, green pepper, and mushroom. How many different kinds of pizza with one topping are available? \_\_\_\_\_
4. You can choose from three types of sandwiches for lunch and three types of juice. How many possible lunch combinations of sandwich and juice can you have? \_\_\_\_\_

**Susan has red, blue, and yellow sweaters. Joanne has green, red, and white sweaters. Diane’s sweaters are red, blue, and mauve. Each girl has only one sweater of each color and will pick a sweater to wear at random. Find each probability.**

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| 5. $P$ (each girl chooses a different color)<br>_____                                      | 6. $P$ (each girl chooses the same color)<br>_____ |
| 7. $P$ (two girls choose the same color, and the third chooses a different color)<br>_____ | 8. $P$ (each girl chooses a red sweater)<br>_____  |