

**Represent the sample space using set notation.**

- 1) A basket contains one apple, one peach, and one orange. You randomly pick a piece of fruit.
- 2) A jewelry store sells rings with either a ruby, sapphire, emerald, or diamond gemstone.
- 3) A bagel shop has three types of bagels: plain, onion, and raisin.
- 4) The band must decide when to meet for a practice. The possible times are 3, 4, or 5 p.m.
- 5) A room in a house needs to be painted. The room can be painted either white or yellow.

**Find the number of possible outcomes in the sample space.**

- 6) A basketball player attempts five free throws. Each attempt results in a score or a miss.
- 7) When a button is pressed, a computer program outputs a random even number greater than 0 and less than 8. You press the button four times.
- 8) A math quiz has seven true/false questions.

**Find the probability.**

- 9) A litter of kittens consists of three gray kittens, two black kittens, and three mixed-color kittens. You randomly pick one kitten. The kitten is gray or mixed-color.
- 10) A bag contains five yellow jerseys numbered one to five. The bag also contains three purple jerseys numbered one to three. You randomly pick a jersey. It is purple or has an even number.