13. **TAKS REASONING** A vase holds 7 red roses and 5 pink roses. You randomly choose a rose, place it in a different vase, then randomly choose another rose. What is the approximate probability that both the first and second roses are red?

Ⓐ 0.29 Ⓑ 0.32 Ⓒ 0.34 Ⓓ 0.37

CHESS PIECES In Exercises 14–17, consider a bag that contains all of the chess pieces in a set, as shown in the diagram.

	King	Queen	Bishop	Rook	Knight	Pawn
Black	1	1	2	2	2	8
White	1	1	2	2	2	8

14. You choose one piece at random. Find the probability that you choose a black piece or a queen.

15. You choose one piece at random, replace it, then choose a second piece at random. Find the probability that you choose a rook, then a bishop.

16. You choose one piece at random, do not replace it, then choose a second piece at random. Find the probability that you choose a king, then a pawn.

17. **ERROR ANALYSIS** *Describe* and correct the error in finding the probability that you randomly choose a pawn and a second pawn, without replacement.

$$P(\text{pawn and pawn}) = P(\text{pawn}) \cdot P(\text{pawn})$$
$$= \frac{16}{32} \cdot \frac{16}{32} = \frac{1}{4}$$

In Exercises 18 and 19, use the following information. Two mutually exclusive events for which one or the other must occur are called *complementary* events. If events A and B are complementary events, then $P(A) + P(B) = 1$.

18. **WEATHER** A local meteorologist reports that there is a 70% chance of rain tomorrow. What is the probability that it will *not* rain tomorrow?

19. **BASKETBALL** You make 31% of your attempted 3-point shots. What is the probability that you miss your next attempted 3-point shot?

20. **WRITING** You write the letters of the word WISDOM on pieces of paper and place them in a bag. You randomly choose 2 letters from the bag at the same time. *Explain* whether these events are independent or dependent. What is the probability that you choose the letters S and D?

21. **CHALLENGE** The sections of the spinner shown all have the same area. You spin the spinner.

a. Find the probability that the spinner stops on red *or* a prime number *or* a multiple of 3. You may want to draw a Venn diagram to find the answer.

b. Write a general formula for $P(A \text{ or } B \text{ or } C)$ where A, B, and C are overlapping events. *Explain* your reasoning.