

Practice 9-4

Compound Events

Each letter in the word MASSACHUSETTS is written on a card. The cards are placed in a basket. Find each probability.

- 1. What is the probability of selecting two S's if the first card is replaced before selecting the second card?
- 2. What is the probability of selecting two S's if the first card is not replaced before selecting the second card?

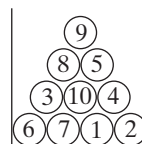
You roll a fair number cube. Find each probability.

- 3. $P(3, \text{ then } 5)$
- 4. $P(2, \text{ then } 2)$
- 5. $P(5, \text{ then } 4, \text{ then } 6)$
- 6. $P(6, \text{ then } 0)$

Four girls and eight boys are running for president or vice president of the Student Council. Find each probability.

- 7. Find the probability that two boys are elected.
- 8. Find the probability that two girls are elected.
- 9. Find the probability that the president is a boy and the vice president is a girl.
- 10. Find the probability that the president is a girl and the vice president is a boy.

A box contains ten balls, numbered 1 through 10. Marisha draws a ball. She records its number and then returns it to the bag. Then Penney draws a ball. Find each probability.



- 11. $P(9, \text{ then } 3)$
- 12. $P(\text{even, then odd})$
- 13. $P(\text{odd, then } 2)$
- 14. $P(\text{the sum of the numbers is } 25)$
- 15. $P(\text{prime, then composite})$
- 16. $P(\text{a factor of } 8, \text{ then a multiple of } 2)$
