Name

Date

ESSON 11.5 **Practice C**

For use with the lesson "Find Probabilities of Independent and Dependent Events"

- **1.** Events A, B, and C are independent. P(A) = 0.15, P(B) = 0.2, and P(C) = 0.35. Find P(A and B and C).
- **2.** A bag contains 5 blue marbles, 11 purple marbles, and 9 yellow marbles. Describe and correct the error in finding the probability that two marbles taken from the bag at random without replacement are both blue.

$$P = (\text{blue, blue}) = \frac{5}{25} \cdot \frac{5}{25} = \frac{25}{625}$$

Mrs. Henrick is dividing her class of 20 students into three teams. She needs to choose three team leaders. To be fair, she places the names in a hat to draw three names for the leaders. There are 8 girls and 12 boys in the class. For exercises 3 and 4, find the probabilities.

- **3.** P(girl, then girl, then girl)
- **4.** P(boy, then boy, then girl)
- **5.** A refrigerator contains bottles of juice of grape juice and cranberry juice in two sizes. The number of each type of bottle is shown in the table. Find the probabilities.

	8 oz	12 oz
grape	3	5
cranberry	2	4

- **a.** $P(\text{cranberry} \mid 8 \text{ oz})$
- **b.** P(8 oz | cranberry)
- **6.** Fruit Angela has a bowl of fruit that contains 5 apples, 4 oranges, and 6 lemons. She randomly selects two pieces of fruit from the bowl.
 - **a.** What is the probability that the first piece of fruit is not a lemon, and the second piece of fruit is a lemon if the first piece of fruit is replaced before selecting the second piece of fruit?
 - **b.** What is the probability that the first piece of fruit is not a lemon, and the second piece of fruit is a lemon if the first piece of fruit is not replaced?