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LESSON
11.5

## Practice C

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

1. Events $\mathrm{A}, \mathrm{B}$, and C are independent. $P(\mathrm{~A})=0.15, P(\mathrm{~B})=0.2$, and $P(\mathrm{C})=0.35$. Find $P(\mathrm{~A}$ 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. $\quad P($ girl, then girl, then girl)
4. $\quad P$ (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.

|  | $\mathbf{8}$ oz | $\mathbf{1 2} \mathbf{~ o z}$ |
| :---: | :---: | :---: |
| grape | 3 | 5 |
| cranberry | 2 | 4 |

a. $P($ cranberry $\mid 8 \mathrm{oz})$
b. $P(8 \mathrm{oz} \mid$ 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?

