

**12 Chapter 12 Test, Form 2B**

*Write the letter for the correct answer in the blank at the right of each question.*

**For Questions 1–4, draw a tree diagram or use the Fundamental Counting Principle to find the number of possible outcomes.**

1. A month of the year and a day of the week are picked at random.  
 A. 19                      B. 48                      C. 84                      D. 96                      1. \_\_\_\_\_
2. A number cube is rolled, and then a nickel and a dime are tossed.  
 F. 8                      G. 10                      H. 12                      J. 24                      2. \_\_\_\_\_
3. There are 5 choices for each of 6 multiple-choice questions on a quiz.  
 A. 30                      B. 15,625                      C. 7,776                      D. 11                      3. \_\_\_\_\_
4. A day of the week is picked at random and a number cube is rolled.  
 F. 84                      G. 42                      H. 13                      J. 2                      4. \_\_\_\_\_
5. **TRANSPORTATION** In the last 14 days, Xavier's bus has been late 5 times.  
 What is the experimental probability that the bus will be late tomorrow?  
 A.  $\frac{1}{19}$                       B.  $\frac{1}{14}$                       C.  $\frac{5}{19}$                       D.  $\frac{5}{14}$                       5. \_\_\_\_\_
6. **BASEBALL** In practice, Jason made a hit 8 out of 34 times at bat.  
 What is the experimental probability that he will make a hit?  
 F.  $\frac{8}{17}$                       G.  $\frac{4}{17}$                       H.  $\frac{1}{8}$                       J.  $\frac{1}{34}$                       6. \_\_\_\_\_

**For Questions 7 and 8, use the following information. In a bag, there are 3 red marbles, 5 white marbles, and 7 blue marbles. Once a marble is selected, it is not replaced. Find each probability.**

7.  $P(\text{two red marbles})$   
 A.  $\frac{1}{5}$                       C.  $\frac{1}{25}$   
 B.  $\frac{1}{35}$                       D.  $\frac{12}{35}$                       7. \_\_\_\_\_
8.  $P(\text{a blue marble and then a white marble})$   
 F.  $\frac{7}{45}$                       H.  $\frac{173}{210}$   
 G.  $\frac{1}{6}$                       J.  $\frac{4}{5}$                       8. \_\_\_\_\_

**For Questions 9 and 10, use the following information. A number cube is rolled and a card is drawn from a deck of twelve cards numbered 1 to 12. Find each probability.**

9.  $P(5 \text{ on the number cube and } 8 \text{ on the card})$   
 A.  $\frac{1}{4}$                       B.  $\frac{1}{306}$                       C.  $\frac{1}{9}$                       D.  $\frac{1}{72}$                       9. \_\_\_\_\_
10.  $P(\text{greater than 2 on the number cube and even on the card})$   
 F.  $\frac{2}{3}$                       G.  $\frac{1}{2}$                       H.  $\frac{1}{3}$                       J.  $\frac{4}{51}$                       10. \_\_\_\_\_

**12****Chapter 12 Test, Form 2B** *(continued)*

**DRINKS** For Questions 11 and 12, use the results of a survey of 60 people shown at the right.

Favorite Fruit Juices	
orange	21
grapefruit	6
pineapple	10
apple	15
tomato	8

11. What is the probability that a person's favorite juice is apple?  
 A.  $\frac{1}{4}$                       B. 15                      C.  $\frac{3}{20}$                       D.  $\frac{1}{5}$                       11. \_\_\_\_\_
12. What is the probability that a person's favorite juice is *not* pineapple?  
 F.  $\frac{1}{6}$                                       H. 10  
 G.  $\frac{5}{6}$                                       J.  $\frac{1}{2}$                       12. \_\_\_\_\_
13. **BASKETBALL** This season, Sue has made 75% of her free throw shots. What is the probability that she will make her next three free throw shots?  
 A.  $\frac{36}{169}$                                       C.  $\frac{27}{64}$   
 B.  $\frac{15}{37}$                                       D.  $\frac{32}{49}$                       13. \_\_\_\_\_
14. To evaluate the satisfaction of its customers, a local car dealer selects every tenth customer on its alphabetic customer list. Describe the sample.  
 F. voluntary response  
 G. convenience  
 H. stratified random  
 J. systematic random                      14. \_\_\_\_\_

**ELECTIONS** For Questions 15 and 16, use the following information. As voters leave the polling place, 250 voters are surveyed at random. Seventy-five voters said they voted for the incumbent mayor.

15. What percent said they voted for the incumbent?  
 A. 30%                      B. 45%                      C. 50%                      D. 75%                      15. \_\_\_\_\_
16. If 1,400 people vote, how many do you think will vote for the incumbent?  
 F. 420 people  
 G. 630 people  
 H. 700 people  
 J. 1,050 people                      16. \_\_\_\_\_

**Bonus** Each arrangement of the letters in the word *BONUS* is placed on a piece of paper. One paper is selected at random. What is the probability that the word ends in **OUN**? **B:** \_\_\_\_\_