Worksheet 12-8 ** Compound Probability

You spin a spinner that has 12 equal-sized sections numbered 1 to 12. Find each probability.

1. P(3 or 4)   **2.** P(even or 7)

3. P(even or odd)   **4.** P(multiple of 3 or odd)

5. P(multiple of 2 or multiple of 3)   **6.** P(less than 5 or greater than 9)

You roll a red number cube and a blue number cube. Find each probability.

7. P(red 2 and blue 2)   **8.** P(red odd and blue even)

9. P(red greater than 2 and red 4)   **10.** P(red odd and blue less than 4)

11. The probability that Bob will make a free throw is $\dfrac{2}{5}$. What is the probability that Bob will make his next two free throws?

You choose a marble at random from a bag containing 3 blue marbles, 5 red marbles, and 2 green marbles. You replace the marble and then choose again. Find each probability.

12. P(both blue)   **13.** P(both red)

14. P(blue then green)   **15.** P(red then blue)

16. P(green then red)   **17.** P(both green)

You choose a tile at random from a bag containing 2 tiles with X, 6 tiles with Y, and 4 tiles with Z. You pick a second tile without replacing the first. Find each probability.

18. P(X then Y)   **19.** P(both Y)

20. P(Y then X)   **21.** P(Z then X)

22. P(both Z)   **23.** P(Y then Z)

24. There are 12 girls and 14 boys in math class. The teacher puts the names of the students in a hat and randomly picks one name. Then the teacher picks another name without replacing the first. What is the probability that both students picked are boys?