

NAME _____ Period _____

Worksheet 12-8 ** Compound Probability

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

1. $P(3 \text{ or } 4)$
2. $P(\text{even or } 7)$
3. $P(\text{even or odd})$
4. $P(\text{multiple of } 3 \text{ or odd})$
5. $P(\text{multiple of } 2 \text{ or multiple of } 3)$
6. $P(\text{less than } 5 \text{ or greater than } 9)$

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

7. $P(\text{red } 2 \text{ and blue } 2)$
8. $P(\text{red odd and blue even})$
9. $P(\text{red greater than } 2 \text{ and red } 4)$
10. $P(\text{red odd and blue less than } 4)$
11. The probability that Bob will make a free throw is $\frac{2}{5}$. 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. $P(\text{both blue})$
13. $P(\text{both red})$
14. $P(\text{blue then green})$
15. $P(\text{red then blue})$
16. $P(\text{green then red})$
17. $P(\text{both green})$

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. $P(X \text{ then } Y)$
19. $P(\text{both } Y)$
20. $P(Y \text{ then } X)$
21. $P(Z \text{ then } X)$
22. $P(\text{both } Z)$
23. $P(Y \text{ then } Z)$

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?