$\qquad$ Period $\qquad$

## 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 $\frac{2}{5}$. 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. $P$ (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. $P(\mathrm{X}$ then Y$)$
19. $P$ (both Y$)$
20. $P(\mathrm{Y}$ then X$)$
21. $P(\mathrm{Z}$ then X$)$
22. $P$ (both Z$)$
23. $P(\mathrm{Y}$ 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?

