NAME _____ CLASS _____ DATE _____

Practice

10.6 Dependent Events and Conditional Probability

Two number cubes are rolled, and the first cube shows 6. Find the probability of each event below.

1. The sum is 9. _____
2. Both numbers are even. _____
3. The sum is greater than 8. _____
4. The sum is greater than 9 and less than 12. _____

A spinner that is divided into 8 congruent regions, numbered 1 through 8, is spun once. Let *A* be the event "even" and let *B* be the event "6." Find each of the following probabilities.

5. $P(A)$ _____
6. $P(B)$ _____
7. $P(A \text{ and } B)$ _____
8. $P(A \text{ or } B)$ _____
9. $P(A|B)$ _____
10. $P(B|A)$ _____

A spinner that is divided into 5 congruent regions, numbered 1 through 5, is spun once. Let *A* be the event "odd" and let *B* be the event "less than 3." Find each of the following probabilities.

11. $P(A)$ _____
12. $P(B)$ _____
13. $P(A \text{ and } B)$ _____
14. $P(A \text{ or } B)$ _____
15. $P(A|B)$ _____
16. $P(B|A)$ _____

Let *A* and *B* represent events.

17. Given $P(A \text{ and } B) = 0.25$ and $P(A) = 0.4$, find $P(B|A)$. _____
18. Given $P(A \text{ and } B) = \frac{3}{5}$ and $P(A) = \frac{2}{3}$, find $P(B|A)$. _____
19. Given $P(B|A) = \frac{4}{5}$ and $P(A) = \frac{5}{8}$, find $P(A \text{ and } B)$. _____
20. Given $P(B|A) = 0.4$ and $P(A) = 0.16$, find $P(A \text{ and } B)$. _____
21. Given $P(B|A) = 0.5$ and $P(A \text{ and } B) = 0.2$, find $P(A)$. _____
22. Given $P(B|A) = 0.8$ and $P(A \text{ and } B) = 0.45$, find $P(A)$. _____