NAME _____ CLASS _____ DATE _____

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Practice Masters Level A

10.6 Dependent Events and Conditional Probability

A box contains 5 purple marbles, 3 green marbles, and 2 orange marbles. Two consecutive draws are made from the box without replacement of the first draw. Find the probability of each event.

1. purple first, orange second _____
2. green first, purple second _____
3. green first, green second _____
4. orange first, green second _____
5. orange first, purple second _____
6. orange first, orange second _____
7. purple first, purple second _____
8. purple first, blue second _____

Let *A* and *B* represent events.

9. Given $P(A \text{ and } B) = \frac{1}{2}$ and $P(A) = \frac{2}{3}$, find $P(B|A)$. _____
10. Given $P(A \text{ and } B) = 0.12$ and $P(A) = 0.2$, find $P(B|A)$. _____
11. Given $P(A) = \frac{1}{4}$ and $P(B|A) = \frac{1}{3}$, find $P(A \text{ and } B)$. _____
12. Given $P(A) = 0.37$ and $P(B|A) = 0.42$, find $P(A \text{ and } B)$. _____
13. Given $P(B|A) = \frac{2}{3}$ and, $P(A \text{ and } B) = \frac{1}{5}$, find $P(A)$. _____
14. Given $P(B|A) = 0.63$ and, $P(A \text{ and } B) = 0.27$, find $P(A)$. _____

Two number cubes are rolled and the first cube shows a 3. Find the probability of each event.

15. Both numbers are 3s. _____
16. A sum of 7. _____
17. The numbers are both odd. _____
18. A sum of 2. _____

For one roll of a number cube, let *A* be the event "multiple of 2" and let *B* be the event "factor of 12." Find each probability.

19. $P(A)$ _____
20. $P(A \text{ and } B)$ _____
21. $P(B|A)$ _____
22. $P(A|B)$ _____