**1.3 Guided Notes**

***Probability of Compound Events***

**Independent and Dependent Events Compound events** are made up of two or more simple events.   
The events can be **independent events** or they can be **dependent events**.

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| **Probability of**  **Independent Events** | Outcome of first event does not  affect outcome of second. | Example: rolling a 6 on a die and then rolling a 5 |
| **Probability of**  **Dependent Events** | Outcome of first event does  affect outcome of second. | Example: without replacing the  first card, choosing an ace and  then a king from a deck of cards |

**Example 1: Find the probability that you will roll a six and then a five when you roll a die twice.**

**Example 2: A bag contains 3 red marbles, 2 green marbles, and 4 blue marbles. Two marbles are drawn randomly from the bag and not replaced. Find the probability that both marbles are blue.**

**Exercises**

**A bag contains 3 red, 4 blue, and 6 yellow marbles. One marble is selected at a time, and once a marble is selected, it is not replaced. Find each probability.**

**1.** *P*(2 yellow) **2.** *P*(red, yellow) **3.** *P*(blue, red, yellow)

**4.** George has two red socks and two white socks in a drawer. What is the probability of picking a red sock and a white sock in that order if the first sock is not replaced?

**5.** Phyllis drops a penny in a pond, and then she drops a nickel in the pond. What is the probability that both coins land with tails showing?

**6.** A die is rolled and a penny is dropped. Find the probability of rolling a two and showing a tail.