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| **Type of Event** | Simple | Independent | Dependent |
| **Definition** | One event. | When the outcome of one event **has no effect** on the outcome of another. | When the outcome of one event **has an effect** on the outcome of another. |
| **Formula** |  |  |  |
| **Example** | A bag contains 3 red marbles, 4 green marbles, and 2 black marbles. What is the probability of a red marble being pulled from the bag? | A bag contains 3 red marbles, 4 green marbles, and 2 black marbles. What is the probability of a red marble being pulled from the bag being replaced and then pulling a green marble out? | A bag contains 3 red marbles, 4 green marbles, and 2 black marbles. What is the probability of a red marble being pulled from the bag and without replacing it, then pulling a green marble out? |
| **Solution** |  |  |  |

**Probability of Events**

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| **Type of Event** | Simple | Independent | Dependent |
| **Example** | The letters to the word Fairfield are placed in a bag. What is the probability of picking a “f”? | The letters to the word Fairfield are placed in a bag. What is the probability of picking a “f” and then an “i”? | The letters to the word Fairfield are placed in a bag. What is the probability of picking a “f” and without replacing it picking another “f”? |
| **Solution** |  |  |  |
| **Example** | What is the probability of rolling an odd number on a number cube? | A spinner is broken down into even sections that are colored red, blue, yellow, green, and orange. What is the probability of spinning once and getting blue and then again getting green? | There are 2 mechanical pencils, 4 colored pencils, and 5 regular pencils in the desk. What is the chance of pulling a mechanical pencil out and then without replacing it pulling a colored pencil out? |
| **Solution** |  |  |  |