

Name: \_\_\_\_\_

## Independent Events

**Exercise 1:** Determine if the following scenarios are independent or dependent.

- 1) Flipping a coin 3 times
- 2) 2 people have the same birthday
- 3) Selecting a marble from a bag, not replacing it, and then selecting another marble from the bag

**Exercise 2:** A circular spinner is divided into 5 equal parts. If the spinner is spun 3 times, what is the probability that an even number is spun all 3 times?

**Exercise 3:** 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) P(orange first, green second)
- 2) P(both marbles are purple)
- 3) P( the first marble is purple, and the second is ANY color EXCEPT purple)

**Exercise 4:** If you draw two cards from a standard deck of 52 cards without replacement, find:

- 1) P(King first, Jack second)
- 2) P(face card first, ace second)
- 3) P(2 aces)

**Exercise 5:** Bag A contains 9 red marbles and 3 green marbles. Bag B contains 9 black marbles and 6 orange marbles. Find the probability of selecting one green marble from bag A and one black marble from bag B.

**Exercise 6:** Two seniors are randomly selected to travel to China is in a class of 18 students and Malaysia is in a class of 20 students. Find the probability that both China and Malaysia will be selected.