| Unit: Probability | Name _____ |
|---|---|
| Student Handout 6 | Date _____ Pd_____ |

# DEPENDENT EVENTS

When the outcome of one _____ impacts the _____ of another, it is a dependent event.

Read each situation below and determine if it is an independent or a dependent event.

_____ 1. Flipping two coins results in one landing on heads and one landing on tails.

_____ 2. The captain of the football team is selected and then the co-captain is selected.

_____ 3. You draw a joker from a deck of cards, and then you draw an ace.

_____ 4. You draw a queen from a deck of cards, replace it, and then draw a 10.

_____ 5. A coin is flipped and a number cube is rolled.
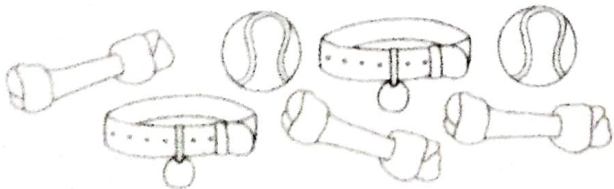
| **INDEPENDENT PROBABILITY** | P(A and B) = _____ • _____ |
|---|---|
| **DEPENDENT PROBABILITY** | P(A and B) = _____ • _____ |

Determine the probability of the events below, **if the 1st item chosen is not replaced!**

6. Neil goes to the pet shop and selects a treat for his dog. He chooses one and then chooses another. What is the probability that Neil selects a bone and then a ball?

_____ • _____ = 
bone       ball

7. Mackenzie chooses one candle and then chooses another candle. What is the probability that Mackenzie selects a polka dot candle both times?

_____ • _____ =
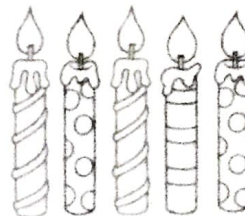
# DEPENDENT EVENTS

Use the details about the game to answer the questions below.

In a board game, students draw a number, do not replace it, and then draw a second number. Determine the probability of each event occurring.

| 1 | 6 | 6 | 9 | 2 | 1 | 6 | 2 |

*Not prime Not composite* — *Composite* — *Composite* — *prime* — *Not prime Not Comp.* — *Comp.* — *prime.*

| 1. Drawing an odd number, then drawing a 6 | 2. Drawing a 2, then drawing another 2 | 3. Drawing a number divisible by 3, then drawing a 1 |
|---|---|---|
|  |  | *Divisible by 3: 6, 9* |
| 4. Drawing a 1, then drawing a 6 | 5. Drawing a prime number, then drawing a composite number | 6. Drawing a 9, then drawing another 9 |
| 7. Drawing a 9, then drawing a number divisible by 1 *(all the #s are divisible by 1)* | 8. Drawing an even number, then drawing 1 | 9. Drawing a 6, then drawing an odd number |

Choose the best answer below for question 10.

10. Harmony places the letters in the word DECEMBER into a bag. A letter will be randomly selected and not replaced. Then another letter will be selected. What is the probability of Harmony selecting a C and then an E?

A. $\frac{4}{8}$    B. $\frac{3}{56}$

C. $\frac{6}{64}$    D. $\frac{1}{8}$

*D E C E M B E R (How many letters? ___ )*