

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**

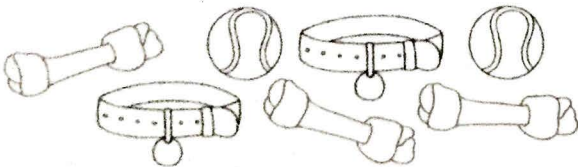
$$P(A \text{ and } B) = \underline{\hspace{2cm}} \cdot \underline{\hspace{2cm}}$$

**DEPENDENT
PROBABILITY**

$$P(A \text{ and } B) = \underline{\hspace{2cm}} \cdot \underline{\hspace{2cm}}$$

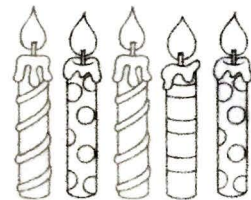
Determine the probability of the events below.

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?



$$\frac{\underline{\hspace{2cm}}}{\text{bone}} \cdot \frac{\underline{\hspace{2cm}}}{\text{ball}} =$$

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



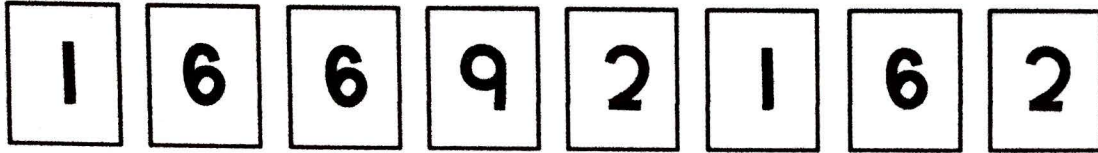
$$\underline{\hspace{2cm}} \cdot \underline{\hspace{2cm}} =$$

DEPENDENT EVENTS

Info
• Prime # - has 2 factors - 1 and itself
• Divisible means when you divide 1 number by another you get a whole #.

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. 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
4. Drawing a 1, then drawing a 6	5. Drawing a prime number, then drawing a composite number <i>1 is <u>not</u> prime or composite.</i>	6. Drawing a 9, then drawing another 9
7. Drawing a 9, then drawing a number 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. $\frac{1}{8}$