Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Table #:\_\_\_\_\_\_\_ Period: \_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_

**10.4A Fundamental Counting Principle\_Classwork**

*Objective: Model with Mathematics (MP3). Use tree diagrams, tables, or a formula to find the number of possible outcomes; find probabilities of compound events (CCSS.7.SP.8)*

*HW: worksheet-10.4A HW*

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| --- | --- |
| **Fundamental counting principle:** | |
| **Example 1:** You flip a coin and spin the spinner with 3 equal sizes. How many outcomes are possible? | **Example 2:** You pick a marble (a bag of 4 marbles) and roll a die. How many outcomes are possible? |
| **Example 3:** You pick a marble (a bag of 4 marbles) and flip a coin. How many outcomes are possible? | **Example 4:** Hunter wants to buy a new pair of skates. He can buy speed skates, figure skates, or hockey skates. A pair of skate can come in blue or silver, and can be decorated with blue streaks or green clovers. How many different combinations can Hunter choose from? |
| **Compound Event:** | |
| **Example 1:** You flip a coin and spin the spinner with 3 equal sizes (A, B, and C). What is the probabilities of getting an A/Head? | **Example 2:** You pick a marble (a bag of 4 marbles: Red, Yellow, Green, Blue) and roll a die. What is the probabilities of getting a Red/even number? |
| **Example 3:**   1. Find the total number of possible outcomes of rolling a number cube and flipping a coin. 2. What is the probability of rolling a number greater than 4 and flipping tails? | **Example 4:**  You flip three nickels. What is the probability of flipping two head and one tails? |