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| Name: | Class: | Date |

**Chapter 5: Probability**

Probability is the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ or \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ that an event will occur. It is often expressed in \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_\_\_\_, or \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

**Single Events:**

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| Probability = |

(Where an \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is a possible \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of a probability experiment)

**Example:** You have a spinner with four equal sections labelled with the colours red, green, blue, and yellow. Represent the following as a fraction, ratio, and a percent.

1. P(red) =
2. P(colour) =
3. P(green or blue) =
4. P(purple) =

**Independent Events** occur when the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of one event has \_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ on the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_of another event.

**Organizing outcomes**

When dealing with two independent events, there are different ways organize the possible outcomes.

**Sample Space**: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of an experiment (these can be organized in \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ diagrams.

**Table method:**

**Example:** Use the table to show the possible outcomes when choosing from a bag filled with 5 marbles: green, blue, purple, red, yellow and flipping a coin, what are the different possibilities that can result?

**Tree method:**

**Example:** Use the tree method to show the possible outcomes when a 3 section spinner with cat, dog, and mouse is spun and a four sided die is rolled.

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**Probability Practice: (Tables)**

1. Using a table, find the different possible outcomes if you:

* pick a marble from a bag with a 3 purple, 3 red, and 3 blue marbles
* spin a spinner with four sections labelled pie, cake, tart, sundae

1. Using a table, find the different outcomes if you:

* Spin a three section spinner with duck, frog, and ant
* Roll a six sided die

Probability Practice: (Tree Diagrams)

1. Using a tree diagram, find the possible food and drink outcomes for:

* Meal options of sandwiches, burgers, wraps, and entrees
* Beverage options of milk, juice, and pop

1. Using a tree diagram, find the possible outcomes when:

* Rolling a four sided die
* Rolling a six sided die