

Name _____

Date _____

Experiment 1: Probability

1. Introduction

Probability is a measure of the likelihood of an event occurring. It is a fundamental concept in statistics and is used to describe the uncertainty of an outcome. The probability of an event is defined as the ratio of the number of favorable outcomes to the total number of possible outcomes.

For example, if we have a bag containing 10 balls, 5 of which are red and 5 are blue, the probability of drawing a red ball is $\frac{5}{10} = \frac{1}{2}$.

The probability of an event is always between 0 and 1, inclusive.

If the probability of an event is 0, it means that the event is impossible.

If the probability of an event is 1, it means that the event is certain.

The probability of an event is denoted by the letter P , followed by the event in parentheses.

For example, if we have a bag containing 10 balls, 5 of which are red and 5 are blue, the probability of drawing a red ball is $P(\text{red}) = \frac{5}{10} = \frac{1}{2}$.

The probability of an event is also denoted by the letter P , followed by the event in brackets.

For example, if we have a bag containing 10 balls, 5 of which are red and 5 are blue, the probability of drawing a red ball is $P[\text{red}] = \frac{5}{10} = \frac{1}{2}$.

The probability of an event is also denoted by the letter P , followed by the event in curly braces.

For example, if we have a bag containing 10 balls, 5 of which are red and 5 are blue, the probability of drawing a red ball is $P\{\text{red}\} = \frac{5}{10} = \frac{1}{2}$.

The probability of an event is also denoted by the letter P , followed by the event in square brackets.

For example, if we have a bag containing 10 balls, 5 of which are red and 5 are blue, the probability of drawing a red ball is $P[\text{red}] = \frac{5}{10} = \frac{1}{2}$.

The probability of an event is also denoted by the letter P , followed by the event in angle brackets.

For example, if we have a bag containing 10 balls, 5 of which are red and 5 are blue, the probability of drawing a red ball is $P\langle \text{red} \rangle = \frac{5}{10} = \frac{1}{2}$.

The probability of an event is also denoted by the letter P , followed by the event in double angle brackets.

For example, if we have a bag containing 10 balls, 5 of which are red and 5 are blue, the probability of drawing a red ball is $P\langle\langle \text{red} \rangle\rangle = \frac{5}{10} = \frac{1}{2}$.

The probability of an event is also denoted by the letter P , followed by the event in triple angle brackets.

For example, if we have a bag containing 10 balls, 5 of which are red and 5 are blue, the probability of drawing a red ball is $P\langle\langle\langle \text{red} \rangle\rangle\rangle = \frac{5}{10} = \frac{1}{2}$.

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Theoretical Probability

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or



or



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