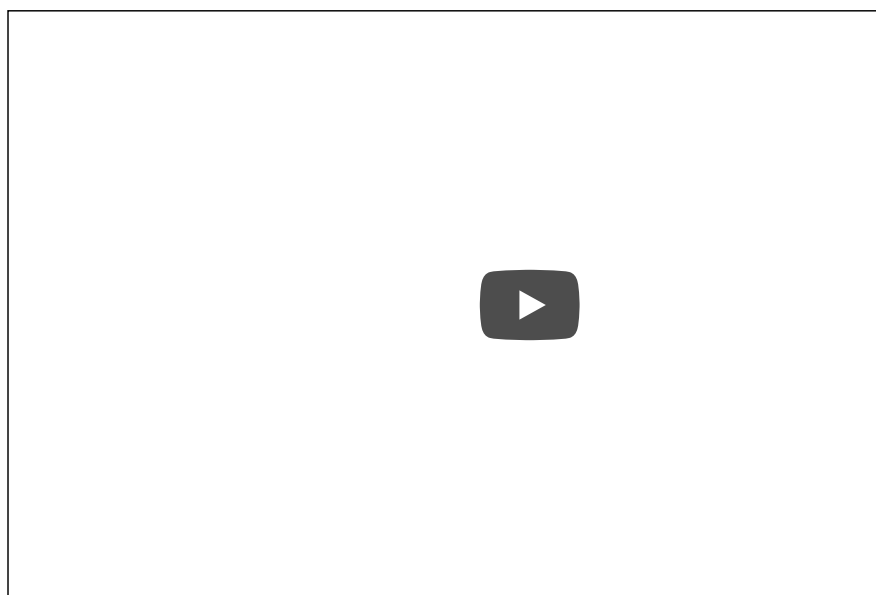




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Introduction to Probability Video

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- [Instructor] Hello and welcome back.
Today, we're going to start talking about probability
and we're going to first discuss randomness and see why it's important, and then we'll motivate the discussion about probability and the meaning of probability.
Then we'll talk about the possible outcomes that we get when we have a probabilistic



5.1_Probability_Introduction

POLL

Which of the following outcomes are random (not certain) when rolling a six-sided dice?

RESULTS

- | | |
|--|------------|
| <input type="radio"/> An even number. | 67% |
| <input type="radio"/> A positive number. | 23% |
| <input checked="" type="radio"/> A real number. | 11% |

Submit

Results gathered from 352 respondents.

FEEDBACK

The outcome of dice is certainly real and positive, but it may or may not be even, so it is random.

1

0/1 point (graded)

Which of the following outcomes are random (not certain) after throwing a six-sided dice?

☒ Get number 3 ✓☐ Get an even number ✓☐ Get a positive number

✗

Explanation

- True. We may get e.g. 4 as an outcome, which is not 3.
- True. We may get e.g. 3 as an outcome, which is not even.
- False. All outcomes of a six-sided dice are positive.

Submit

You have used 2 of 2 attempts

i Answers are displayed within the problem

2

0/1 point (graded)

Imagine an experiment where we flip a coin 6 times, and get "head, tail, head, head, head, head".

Which of the following statements hold?

☒ The coin is not fair.☒ The coin's "tail" probability is $1/6$.☒ The sequence "head, tail, head, head, head, head" is an outcome in the sample space. ✓☐ The sample space of the experiment is {head, tail}.

✗

Explanation

- False. The outcome is random and the coin may be fair.
- False. In this experiment 1 out of 6 outcomes was "tail", but the coin's "tail" probability may differ.
- True. The sample space consists of all sequences of six "head" and "tail", and this is one of them.
- False. The sample space is a set of tuples
 $\{(\text{head}, \text{head}, \text{head}, \text{head}, \text{head}, \text{head}), (\text{head}, \text{head}, \text{head}, \text{head}, \text{head}, \text{tail}), \dots, (\text{tail}, \text{tail}, \text{tail}, \text{tail}, \text{tail}, \text{tail})\}$

Submit

You have used 3 of 3 attempts







i Answers are displayed within the problem

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