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## Quiz 1

### Checkboxes

1/1 point (graded)

What is probability and statistics useful for?

- ☒ To quantify uncertainty
- ☐ To find exact solutions to mathematical problems
- ☐ To make predictions about future events

### Answer

Correct:

Video: Why Probability and Statistics

Submit

### Checkboxes

1/1 point (graded)

Which of the following problems can best be solved with probability and statistics?

- ☒ Predicting the number of rainy days in April

☐ Finding the interest on a 30-year fixed rate mortgage

☒ Estimating your potential winnings in a game of Blackjack

☐ Finding the amount of turf required to cover a football field



### Answer

Correct:

Video: Why Probability and Statistics

Submit

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## Multiple Choice

1/1 point (graded)

Suppose a coin is tossed **1000** times and comes up heads **610** times.  
Is the coin biased?

☒ Yes, with very high probability ✓

☐ Unclear

### Answer

Correct: Video: What is Probability

Submit

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## Multiple Choice

1/1 point (graded)

What is the probability of drawing a Queen from a deck of **52** cards?

☐  $\frac{1}{52}$

☒  $\frac{4}{52}$  ✓

☐  $\frac{1}{2}$

☐  $\frac{2}{52}$

### Answer

Correct: Video: What is Probability

Submit

## Checkboxes

1/1 point (graded)

Which of the following describe the differences between probability and statistics?

☒ Probability predicts what will happen. Statistics works with what has already happened.

☐ Probability works with observed variables. Statistics is modeled by random variables.

☐ Probability requires existing data. Statistics requires underlying models.



### Answer

Correct:  
Video: What is Statistics

Submit

## True or False

1/1 point (graded)

If we repeat an experiment many times, the long term frequencies of the outcomes converge to the probabilities.

☒ True ✓

☐ False

### Answer

Correct: Video: History of Probability and Statistics

Submit

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