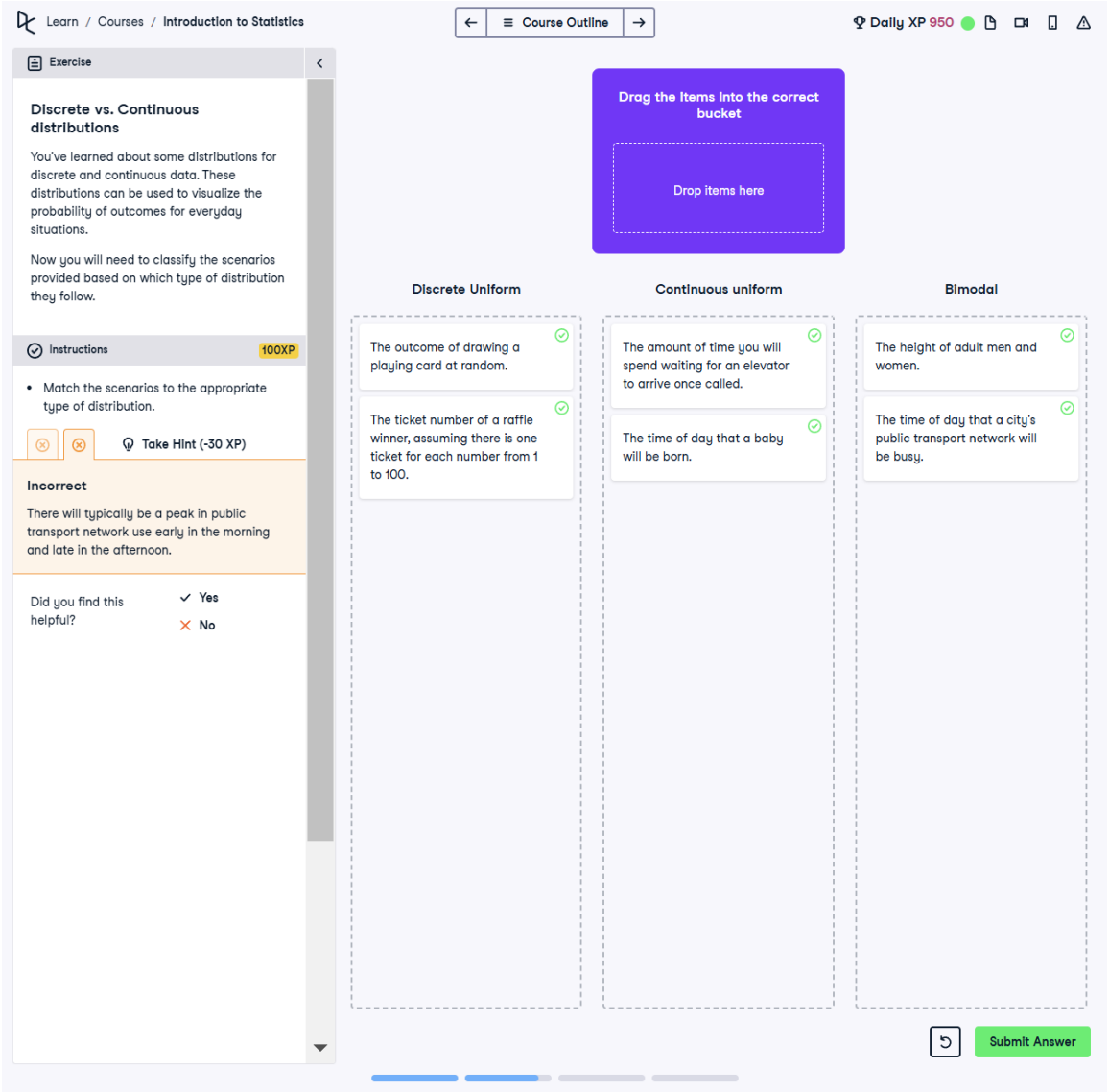
Discrete vs. Continuous Distributions

You've learned about some distributions for discrete and continuous data. These distributions can be used to visualize the probability of outcomes for everyday situations.

Now you will need to classify the scenarios provided based on which type of distribution they follow.



Answer

Discrete Uniform:

- The outcome of drawing a playing card at random.
- The ticket number of a raffle winner, assuming there is one ticket for each

number from 1 to 100.

Continuous Uniform:
- The amount of time you will spend waiting for an elevator to arrive once called.
- The time of day that a baby will be born.

Bimodal:
- The height of adult men and women.
- The time of day that a city’s public transport network will be busy.

Explanation of the Answer

To classify the distributions:

1. **Discrete Uniform**: These distributions involve discrete, equally likely outcomes, such as drawing a playing card (each card has equal probability) or selecting a ticket number from 1 to 100 (all numbers are equally probable).

2. **Continuous Uniform**: These involve continuous data where any value in a range is equally likely, such as the time spent waiting for an elevator or the time of day a baby will be born.

3. **Bimodal**: These distributions have two peaks, such as the heights of adult men and women (two distinct groups) or public transport usage times (typically peaking in the morning and late afternoon).