

① Discrete random variables is one for a random experiment with a finite number of the possible outcomes.

Ex) Random variable that represents coin flipping experiment, possible outcomes = $\{H, T\}$.

② probability Distribution is a statistical

function that describes all the possible values

and likelihoods that a random variable can take within a range.

③ Expected value, in general, is the value that is most likely the result of the next repeated trial of a statistical experiment

$$E(X) = \sum_{i=1}^n (x_i) P(x_i)$$

$$\sigma = \sqrt{\sigma^2} = \sqrt{0.89} = 0.943 \leftarrow \text{standard deviation}$$

Part 3

- ① Discrete, because the number of arrivals can only be of specific integer values, cannot be fraction.
1, 2, 3, ---
- ② ~~Discrete is the label is correct and the weight needs 1.81 ounces~~
- Continuous, since one ounce = 28.3495231 grams
Since the value is fractional, it's continuous.
- ③ Continuous, call can take any value "fractional or integer"
- ④ Discrete, the number of kernels can be counted as integer values.
- ⑤ Discrete, we can count the number of applicants.
- ⑥ Continuous, the time can be fractional

7) Continuous, the weight can take any value including fractional.

8) Discrete, the number of passengers can only be integer value.

9) Discrete, clerical errors can be counted and take only integer values.

10) Discrete, the number of accidents can only take integer values, 0, 1, 2, 3, 4, ...