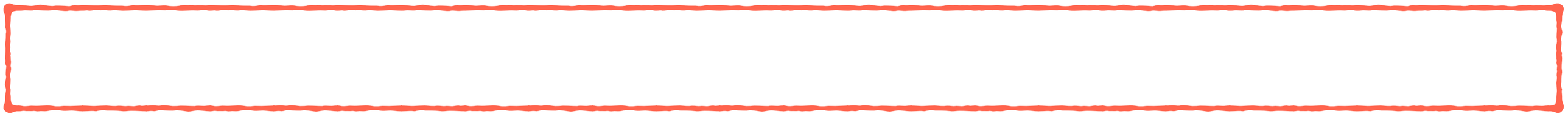
recall from last lecture: discrete random variables



probability mass function

recall from last lecture: discrete random variables

A random variable is discrete if its range is a countable (finite or infinite) set.

If X is a discrete random variable, the function given by $f(x) = P(X = x)$ for each x within the range of X is called the probability distribution of X, also called probability mass function (pmf)

the probability of an event A associated with a discrete random variable X is found by summing up its probability mass function over the values in that set: $P(X \in A) = \sum_{x \in A} f(x)$

this is not feasible when finding the probability of an event A associated with a continuous random variable X

continuous random variables