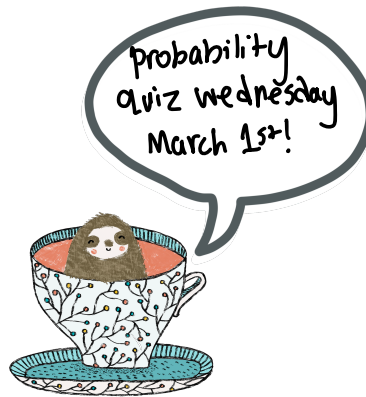


# TEST



# DON'T FORGET

Big Ideas:

- Theoretical versus experimental probability
  - Theoretical probability describes how likely an event is to occur. We know that a coin is equally likely to land heads or tails, so the theoretical probability of getting heads is  $1/2$ .
  - Experimental probability describes how frequently an event actually occurred in an experiment. (so if we actually did a coin toss experiment)
- Discrete versus continuous data
  - A random variable is discrete if the set of values it takes is finite, or can be organized as a list. For example, a random variable that takes only whole-number values is always discrete.
  - A continuous random variable is a random variable that is not discrete. A random variable that can vary continuously, or, in other words, can take any value in an interval, is continuous.
  - For example, the number of pages in a randomly chosen book is discrete because the number of pages is always a whole number. In contrast, its weight is continuous because the weight of a book can vary continuously.
- Converting fractions to decimals and percentages
- Tree graphs

Example problems:

1. Mr. Manga has a jar filled with 200 old dimes. Suppose he selects a dime from the jar without looking. There is a 20% chance that he will draw a dime from the 1960s. How many 1960s dimes are there in Mr. Manga's Jar? Explain.
2. Miss. Liu has 30 pieces of candy, 20 pieces of gum, and 50 chocolates that she has in a bag. Suppose everyone in the class (30 students) gets to draw 1 treat from the bag.
  - A. What is the theoretical probability that you will draw a piece of gum?
  - B. Write the answer in a percentage, decimal, and fraction. Show your work.
3.  $X$  is the number of pages of the longest book in a randomly chosen library. Is the random variable  $X$  discrete or continuous? Explain.
4. Convert the fraction  $16/75$  into a decimal and a percentage. Show your work.