Its important when thinking about the naïve definition of probability that we get right whether each item is unique or not. (combination vs. all possible combos)

Naïve Definition of Probability

1. What’s on the denominator? (ex: every possible combination)
2. What’s on the numerator?

With replacement, Order matters:

W/O replacement, Order matters:

W/O replacement, Order DNM:

With replacement, Order DNM:

No

Yes

Random variable involved?

Start here

1. Define relevant events, random variables, etc. (ex: A is the event we get heads)
2. In terms of what you’ve defined, write down what you are looking for. (ex: P(X=3|A))
3. Think about what your answer should be in terms of – a number (expectation, probability), a random variable, a pdf, etc.