The binomial random variable

- Draw a tree diagram that illustrates the outcomes that could be obtained from three bernoulli trials

- Illustrate on your tree diagrams, which outcomes correspdond to the $X = 0$, $X = 1$, $X = 2$ and $X = 3$ outcomes for a Binomial random variable.

- Hence, calculate the probabilities $P(X = 0)$, $P(X = 1)$, $P(X = 2)$ and $P(X = 3)$ where X is a binomial random variable

- Write out the probability mass function for a binomial random variable with paraemter p and number of trials N.

The binomial random variable

- How many ways are there of arraning N distinguishable objects.

- How many ways are there of arranging N objects of type 1 and M objects of type 2.