power analysis

- determine the prob for both hyp (No software, p)
- get a dist. (under null and alt)
 - test stat (pop proportion and or the number X <- easier because we just count)
 - always binom
 - $-\,$ null and alt will hae same nbut different p
 - peak likely (mode)
 - mean expected
 - lower tail is the left side

80% means it is worth our time to investigate based on a fixed sample size - if it does not fit in this value, then we will see if we need a larger sample