

STAT 333

Day 1

Basic Review

Conditional probability:

$$P(A|B) = \frac{P(A \cap B)}{P(B)}$$
$$P(A \cap B) = P(A|B)P(B)$$

Law of total probability:

$$P(A) = \sum_{i=1}^n P(A|B_i)P(B_i)$$

Baye's Rule:

$$P(B|A) = \frac{P(A|B)P(B)}{P(A)}$$

Example 1.2

Show that when n is large and p is small, the $BIN(n, p)$ distribution may be approximated by a $POI(\lambda)$ distribution where $\lambda = np$.

To be continued...

Day 2
