

Section 2.4: Bayes' Theorem

Tuesday, May 26, 2015
3:15 PM

Assign 3 due on Tuesday, June 9

Test #3 on Thursday, June 11

covers Chapters 2, 3, and 4 inclusive.

suppose you have a situation in which you are given $P(A)$ and $P(B|A)$ but you want to calculate $P(A|B)$ instead. How can you do that easily?

- there's a single calculation that you can do (detailed at end of lecture), but it's more straightforward to take a 'step-by-step' approach

example: The test for a rare disease has 99% reliability. Only one percent of the population has this rare disease.

If the entire population is tested, then some who are healthy will have the test be positive (false positive). Some who have the disease will test negative (false negative).

→ If an individual tests positive, what is the probability that they actually have this rare disease?