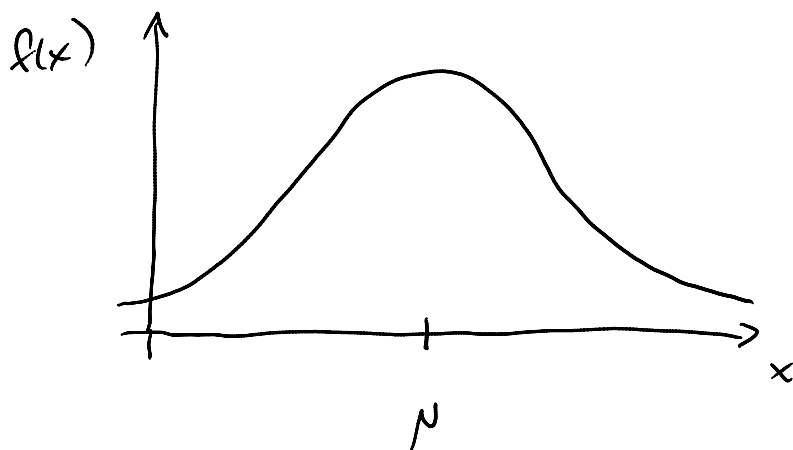


Section 6.3: The Normal Probability Distribution

Tuesday, May 28, 2013
12:10 PM

- mound-shaped distributions occur very frequently



mean μ
standard
deviation σ

where $f(x) = \frac{1}{\sigma\sqrt{2\pi}} e^{-\frac{(x-\mu)^2}{2\sigma^2}}$ for $-\infty < x < \infty$

to find the probability that x lies between points a and b can either

a) integrate - but standard integration techniques fail here!
- have to use numerical methods (Simpson's)

b) look it up in a table of values

problem! you'd need an infinite number of tables, one for each combination of

' μ and σ

solution! standardize it