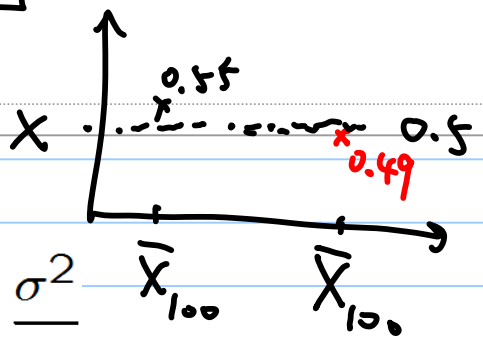
CDA6530

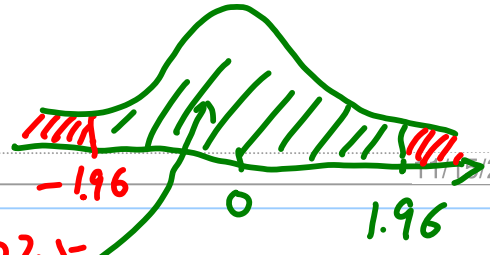
Note Title 11/1/2012



$$Var(\bar{X}) = \frac{\sigma^2}{n}$$

- $P(Z>z_\alpha) = \alpha$
- $z_{0.025} = 1.96$

$P(Z > 1.96) = 0.025$



- $P(-z_{0.025} < Z < z_{0.025}) = 1-2\alpha = 0.95$

$P(-1.96 < Z < 1.96) = 0.95$

$$P(\bar{X} - 1.96\frac{S}{\sqrt{n}} < \theta < \bar{X} + 1.96\frac{S}{\sqrt{n}}) \approx 0.95$$

$$\sqrt{n}\frac{(\bar{X}-\theta)}{S} \approx_z N(0,1)$$

$P(-1.96 < \sqrt{n}\frac{\bar{x}-\theta}{s} < 1.96) = 0.95$

$\bar{x} = 0.56$

$0.56 \pm 0.03 \rightarrow 95\%$

$P(0.53 < \theta < 0.59) = 0.95$