info source	$\Gamma^{-1}(\alpha,\beta)$ α	β
prior	8.25	32625
likelihood	$n-1=$ 13	70612
posterior	$\alpha+n$ 22.25	$\beta+s$ 103237

$n = 14$

$\bar{y} = 5048.7$

$s = 70612$

STAT 206
17 Feb 21

JJ extra OH

(1)

info source	mean	SD
prior		
likelihood		
posterior		

$\lambda \sim \Gamma^{-1}(\alpha,\beta) \rightarrow$

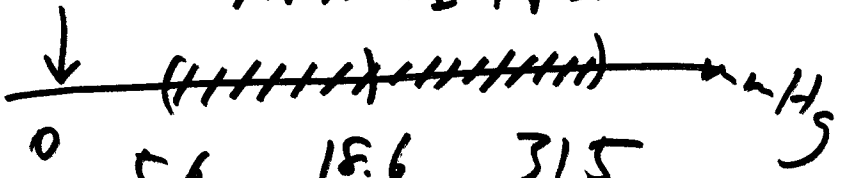
$E(\lambda) = \frac{\beta}{\alpha-1}$

$V(\lambda) = \frac{\beta^2}{(\alpha-1)^2(\alpha-1)}$

$SD(\lambda) = \frac{\beta}{(\alpha-1)\sqrt{\alpha-2}}$

no bias (SE shrinks)

99.9% CI for Δ



since $\Delta_0 = 0$ is not in 99.9% CI,

we conclude that diff. between $\bar{\Delta}_n = 18.6$ & $\Delta_0 = 0$ is statistically & probably real