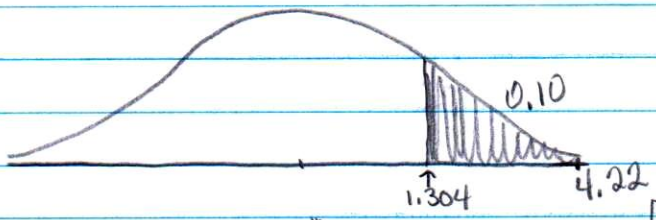
Highway Speeds

"greater than the speed limit"

$n = 40$
$\alpha = 0.1$

① $H_0: \mu \leq 64$
$H_A: \mu > 64$



Reject the null hypothesis

② Critical value $t^*_{0.1,39} = 1.304$ [=ABS(T.INV(0.1, 39))]

③ Test Statistic $t_{39} = \frac{66 - 64}{3/\sqrt{40}} = 4.22$
$\bar{X} = 66$ $S = 3$

④ P-value = 0.0001 [=T.DIST.RT(4.22, 39)]

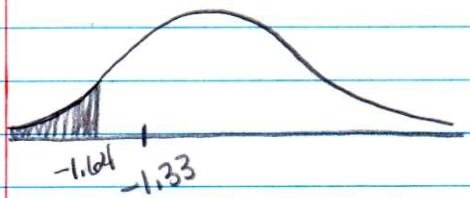
Retailer Services

corrective action needed if satisfaction rate "falls below" 0.91 → Test if retailer needs to take corrective action

$n = 1450$
$\alpha = 0.05$

① $H_0: p \geq 0.91$
$H_A: p < 0.91$

↓ Test if the satisfaction rate is "less than" 0.91



② Critical Value $Z^*_{0.05} = -1.64$ [=NORM.S.INV(0.05)]

③ Test Statistic $\bar{p} = \frac{1305}{1450} = 0.9$
$Z = \frac{0.9 - 0.91}{\sqrt{\frac{(0.91)(0.09)}{1450}}} = -1.33$

Do Not Reject the null hypothesis

④ p-value = 0.0918 [=NORM.S.DIST(-1.33, 1)]