9.43

a) $p = .68$

$\hat{p} = .73$

b) $\mu_{\hat{p}} = .68$

$\sigma_{\hat{p}} = \sqrt{\frac{.68(1-.68)}{150}} = .0381$

c) $z = \frac{.73 - .68}{.0381} = 1.31$

$Pr(z > 1.31) = .0946$

9.46

a) The samp. dist. of $\hat{p}$ will be approx. normal because n is large, with a mean of .47 and a st.dev. of .0156

$1025(.47) \geq 10$

$1025(1-.47) \geq 10$

$\sqrt{\frac{.47(1-.47)}{1025}}$

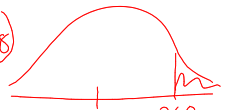
b) $.47 \pm 2(.0156)$

$(.4388, .5012)$

c) $z = \frac{.45 - .47}{.0156} = -1.28$

$Pr(z < -1.28) = .0998$

9.48



$\mu = 250$

$\sigma = 300$

$n = 10{,}000$

$\frac{\sigma}{\sqrt{n}} = \frac{300}{\sqrt{10{,}000}} = 3$

$z = \frac{260 - 250}{3} = 3.33$

$Pr(z > 3.33) = .0004$

9.49

a) $z = \frac{105 - 100}{15} = .33$

$Pr(z > .33) = 1 - .6293 = .3707$

b) $\mu_{\bar{x}} = 100$ $\sigma_{\bar{x}} = \frac{15}{\sqrt{60}} = 1.94$

c) $z = \frac{105 - 100}{1.94} = 2.58$

$Pr(z > 2.58) = .0049$

d) a would change because it's from the pop. b/c would not because samp. dist. is normal if $n \geq 30$ and $n = 60$.