9.2B

1) $\mu_{\hat{p}} = 1/3$ (= pop. prop.)

2) $\sigma_{\hat{p}} = \sqrt{\frac{1/3(2/3)}{60}} = .0609$

3) approx. normal $1/3(60) \geq 10$ $20 \geq 10$ $60(1-1/3) \geq 10$ $40 \geq 10$

4) $\mu_{\hat{p}} = .20$ $\sigma_{\hat{p}} = \sqrt{\frac{.2(.8)}{250}} = .0253$

5) 

$z = \frac{.24-.20}{.0253} = 1.58$

$Pr(z > 1.58) = .0571$ (calc)

9.3B

1) $z = \frac{24 - 20.4}{5.8} = .62$ $Pr(z > .62) = .2676$

2) $\mu_{\bar{x}} = 20.4$ $\sigma_{\bar{x}} = \frac{5.8}{\sqrt{30}} = 1.0589$

3) $z = \frac{24 - 20.4}{1.0589} = 3.40$ $Pr(z > 3.40) = .0003$

4) #1 would change

2 & 3 would not change $\Rightarrow$ acc. to CLT, samp. dist. is normal even if pop. isn't because $n \geq 30$
$30 \geq 30$