a. $\bar{p} - Z_{\alpha/2} \sqrt{\frac{\bar{p}(1-\bar{p})}{n}} < p < \bar{p} + Z_{\alpha/2} \sqrt{\frac{\bar{p}(1-\bar{p})}{n}}$

$0.628 - 2.33 \sqrt{\frac{(0.628)(0.372)}{1000}} < p < 0.628 + 2.33 \sqrt{\frac{(0.628)(0.372)}{1000}}$

$0.628 - 0.0356 < p < 0.628 + 0.0356$

$0.5924 < \mu < 0.6636$

b. $n = \frac{Z_{\alpha/2}^2 \bar{p}(1-\bar{p})}{\epsilon^2}$

$n = \frac{2.33^2(0.628)(0.372)}{0.05^2} = 507.31 \approx 508$