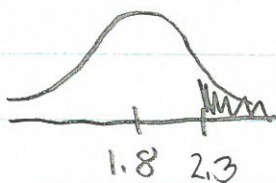


Unit 8 Review #2 Solutions

1a.)



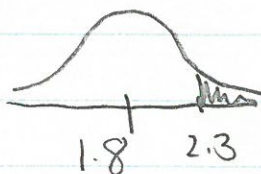
$$.105651$$

b.) $\mu_{\bar{x}} = 1.8$ $\sigma_{\bar{x}} = \frac{.4}{\sqrt{10}} = .13$

c.) Yes $10(10) = 100$ There are at least 100 gallons of sweet tea

d.) Approximately normal because population is normal

e.)

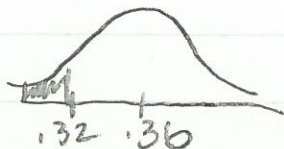


$$.00006$$

2a.) $\mu_p = .36$ $\sigma_p = \sqrt{\frac{.36(1-.36)}{460}} = .024$

b.) $np \geq 10$ $n(1-p) \geq 10$ yes
 $400(.36) = 144$ $400(.64) = 256$

c.)



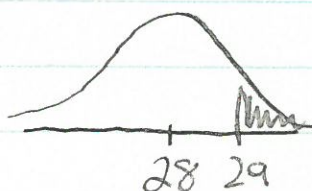
$$.04779$$

3a.) Population is not normal, can't use table

b.) $\mu_{\bar{x}} = 28$ $\sigma_{\bar{x}} = \frac{10}{\sqrt{500}} = .45$

c.) approximately normal since the sample size is more than 30.

d.)



$z = .013134$

4a.) $\mu_{\hat{p}} = .22$ $\sigma_{\hat{p}} = \sqrt{\frac{.22(1-.22)}{300}} = .024$

c.) yes, $10(300) = 3000$ there are more than 3000 American children.

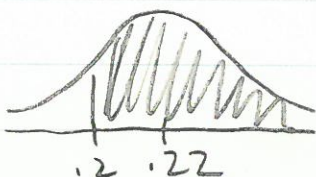
d.) Approx. Normal

$300(.22) = 66$ $300(.78) = 234$

$np \geq 10$ $n(1-p) \geq 10$

both more than 10

e.)



$.797672$