


$$3.(c) \mu = 70 \quad \sigma = 2$$

(CALC)  $NCDF(69, E99, 70, \frac{2}{\sqrt{20}}) = .9873$

(BY HAND)

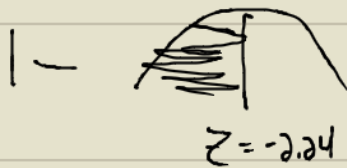
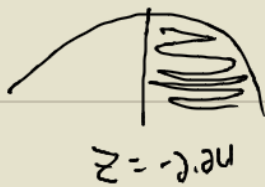
$$Z = \frac{X - \mu_{\bar{X}}}{\sigma_{\bar{X}}}$$

$$\mu_{\bar{X}} = \mu = 70$$

$$\sigma_{\bar{X}} = \frac{\sigma}{\sqrt{n}} = \frac{2}{\sqrt{20}} = .4472135955$$

$$Z = \frac{69 - 70}{.4472135955}$$

$$Z = -2.24$$



$$1 - .0125$$

$$.9875$$