1. $\mu = 40$, $\sigma = 5$, $n = 20$

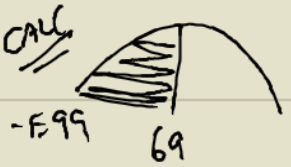
$\mu_{\bar{x}} = \mu$

$= 40$

$\sigma_{\bar{x}} = \frac{\sigma}{\sqrt{n}} = \frac{5}{\sqrt{20}} = 1.12$

2. $\mu = 70$, $\sigma = 2$

a) CALC



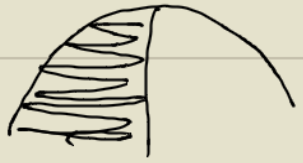
NCDF(-E99, 69, 70, 2) = .3085

BY HAND $z = \frac{x - \mu}{\sigma}$

$z = \frac{69 - 70}{2}$

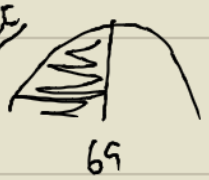
$z = -\frac{1}{2}$

$z = -0.5$



.3085

b) CALC



NCDF(-E99, 69, 70, $\frac{2}{\sqrt{8}}$) = .0786

BY HAND $z = \frac{x - \mu_{\bar{x}}}{\sigma_{\bar{x}}}$

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

$\sigma_{\bar{x}} = \frac{\sigma}{\sqrt{n}} = \frac{2}{\sqrt{8}} = .7071067812$

$z = \frac{69 - 70}{.7071067812}$

$z = -1.41$

.0793