3.(b) $\mu = 65$

$\sigma = 3$

$n = 25$

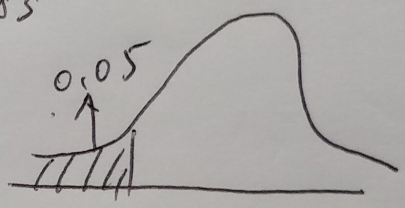
$\bar{X}_{bar} = 64$

st.norm.cdf(x=xbar , loc=μ, scale=σ/n**0.5)

$\Rightarrow 0.0478$

(c) $P(\bar{X}_A \le x) = 0.05 \Rightarrow z \doteq -1.645$

$$\frac{\bar{X}_A - x}{\frac{3}{\sqrt{25}}} = -1.645 \quad , x = 62.2583$$



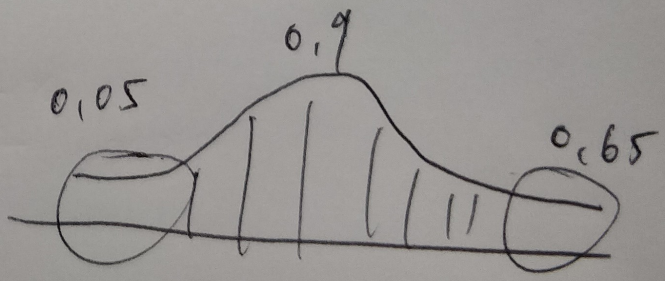
(d) 因常態分佈對稱，中央面積 0.9 等同於

全部面積減掉兩倍之 $P(\bar{X}_A \le x)$

而 x_1 即為 (c) 之 $x = 62.2583$.

另外 $\frac{\bar{X}_A - x_2}{\frac{3}{\sqrt{25}}} = 1.645$

求出 $x_2 = 67.7417$.



$\Rightarrow (x_1, x_2) = (62.2583, 67.7417)$