Monica

Q1.

a. New relaxation app reduces the average is the population mean. 64 regular users is the sample mean.

b. Null Hypothesis is the new relaxation app reduces are equal to the average resting heart rate its regular users
alternative hypothesis is the new relaxation app is greater than the average resting heart rate its regular users.

c. standard error means to know the average of the sample and to the know the differences

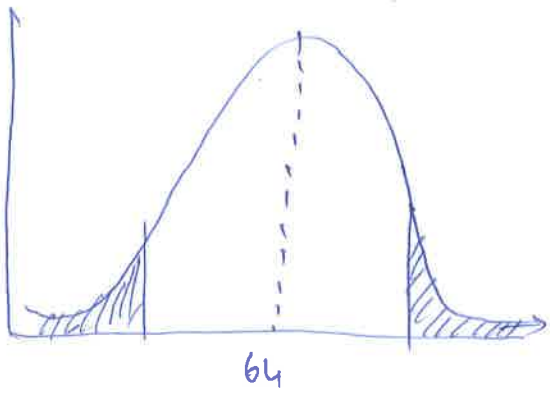
d. $Z\text{-score} = \frac{d-0}{\sqrt{n}} = \frac{3-0}{\sqrt{64}}$

$= \frac{3}{8}$

$= 0.375$

8) 3.000 (0.375
24
60
56
40
40
0

e.




b. $H_0 \leq 64$

$H_1 > 64$

Q2.

a. prior probability is $p(A)$

The value of the prior probability is $p(A) = 0.9$

b. posterior probability is $p(A/B)$, the probability of spam given marked as spam.

c. $p(A) = 0.9$

$p(A \cap B) = 20\%$.

$p(\sim A / B) = 0.05$

This is the formula $p(A/B) = \dfrac{p(B/A) \cdot p(A)}{p(B/A)p(A) + p(B/A^c)p(A^c)}$

To find $p(B)$ the formula is $p(B/A)p(A) + p(B/A^c)p(A^c)$

d. I think so it will be ~~higher~~ lower than the prior because ~~the~~ it is based on data that we can say in our data the prior is 0.9 and the posterior is 20%. i.e 0.2