

b)

Decision		
	Decision Difference	No Difference
H_0	Type 1 error	No error
H_1	no error	Type 2 error

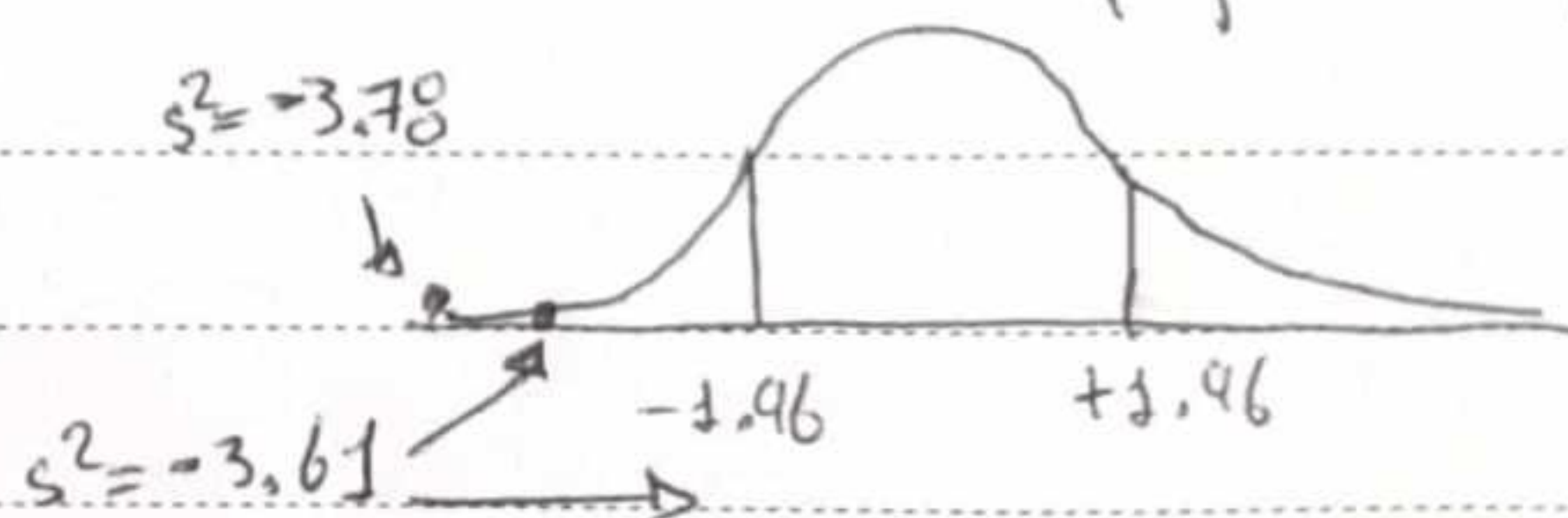
When we decrease the sample size of one side (scroll sh) we can be in a way of committing a Type II error

So as marked here: $SE(\bar{x}_A - \bar{x}_B) = \sqrt{\frac{8.2}{40} + \frac{8.2}{110}}$

Power = $1 - p(\text{Type 2 error})$

$SE(\bar{x}_A - \bar{x}_B) = 0.5286$

if we decrease this number (sample size) we got another $SE(\bar{x}_A - \bar{x}_B)$ and this one tends to the right increasing the probability of rejecting H_0 or not rejecting H_0 to ∞



So, in order to reduce the chance of a Type 2 error without increasing the chance of Type 1 error I should increase N .