**ASSIGNMENT 3 Q1**

**Explanation:**

We are going to conduct a 2 SAMPLE Z TEST on 2 Independent samples with Numerical Data

We need to check whether the mean of both samples are different and if there is any significance difference between the two samples?

Step 1

Make two Hypothesis one contradicting to other

Null Hypothesis is what we want to prove

Null Hypothesis: µ1 = µ2

Alternative Hypothesis: µ1 ≠ µ2

Step 2

Decide a cut-off value

Significance 5%

alpha = 0.05

As it is a two-tailed test

alpha/2 = 0.025

After calculating P value,

Compare p\_value with "Alpha (α)" (Significance Level)

If p\_value is not equal to Alpha, we failed to reject Null Hypothesis because of lack of evidence

If p\_value is = Alpha, we reject Null Hypothesis

**ANSWER: (FROM PYTHON CODE)**

Significance=0.025, p=0.472

We fail to reject Null hypothesis

Hence, we fail to reject Null Hypothesis because of lack of evidence, there is no significant difference between the two samples