

Homework 6. Q1

- 1) H_0 : public school students.
 H_a : charter school students.

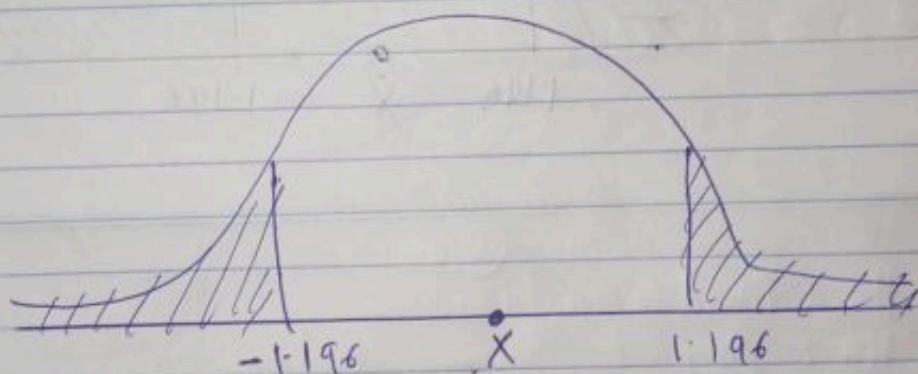
2. The significant level $\alpha = 0.05$

3. The type of design for this study is to predict which school has better academic performance between public school and charter school.

4. public school $\bar{X} = 9$, $n = 75$, $s = 6.61$

Charter school $\bar{X} = 19.5$, $n = 8$, $s = 5.24$

5



$$6 \quad Z = \frac{19.5 - 9}{\frac{1.96 \sqrt{5.24 - 6.61}}{\sqrt{8}}} = \frac{10.5}{-1.34988} = -7.8$$

7. We reject the null hypothesis.

8. Since the Z value is negative we reject the null hypothesis.

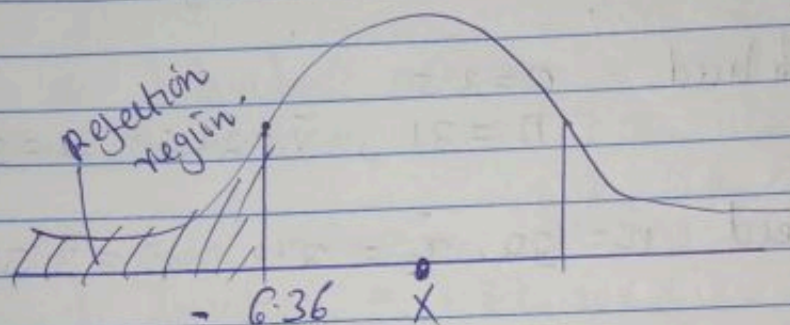
Q2. (II)

1) H_0 : Smoker
 H_A : Non-Smoker

2) Single t-test $\alpha = 0.01$

3) The type of design is to investigate the effect of smoking to the workers.

5



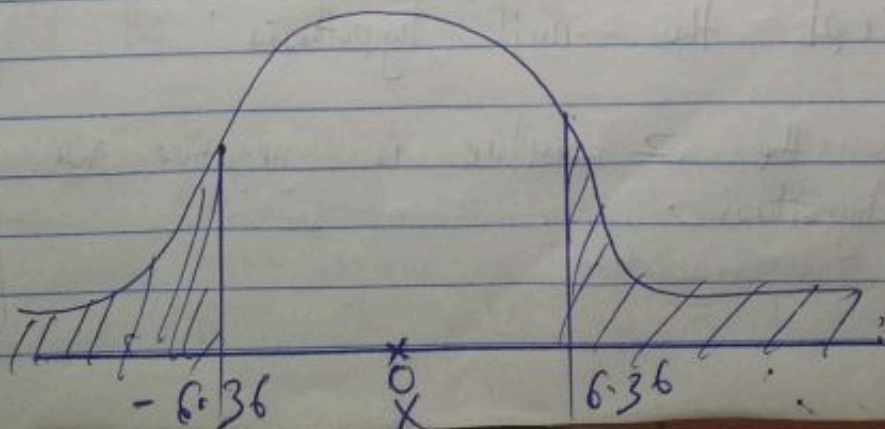
(III)

1) H_0 : Low sodium diet
 H_A : High sodium diet

2) Two-tailed t-test $\alpha = 0.05$

3) The design for this study is to determine if blood pressure is associated with low or high sodium diet.

5



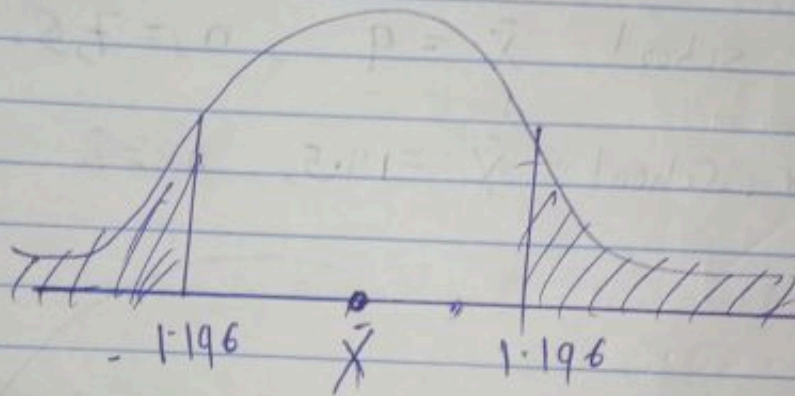
(iv)

1) H_0 : High temperature greater than 90 degrees.
 H_a : High temperature greater than 50 degrees

2) Two tailed t-test $\alpha = 0.005$.

3) The design is to determine whether higher temperature lead to more aggressive behavior.

5.



v.

1) H_0 : Job seekers receiving no therapy.
 H_a : Job seekers receiving coping therapy.

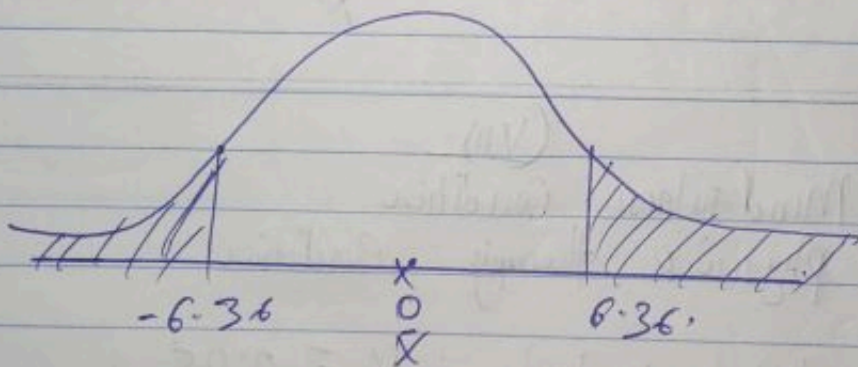
2 Two tailed t-test $\alpha = 0.01$

3 The type of design is to determine whether helping job seeker living in poverty cope with anxiety might lead to difference.

4 Job seekers receiving no therapy
 $n = 7$, $s = 6.6$ $\bar{x} = 9$

Job seekers receiving anxiety coping therapy.
 $n = 8$, $s = 5.24$ $\bar{x} = 19.5$

5



$$6 \quad \frac{19.5 - 9}{\sqrt{5.24 - 6.6}} = \frac{10.5}{1.166} = -9.005$$

7 We reject the null hypothesis

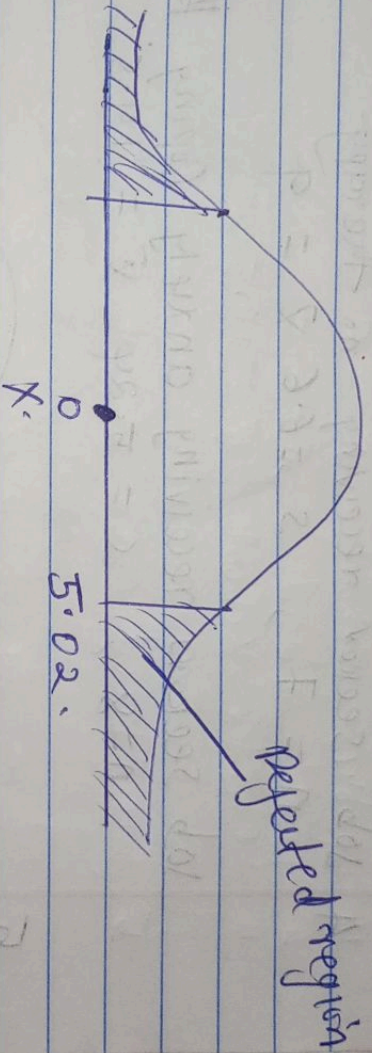
8 Since the z value is negative we reject the null hypothesis.

V
1) H_0 : Gestermine sugar pill.
 H_1 : placebo sugar pill.

2) One tailed - t - test $\alpha = 0.01$

3) The design of the study is to determine the supplement
There is effective between Gestermine and placebo
Sugar pill.

5.



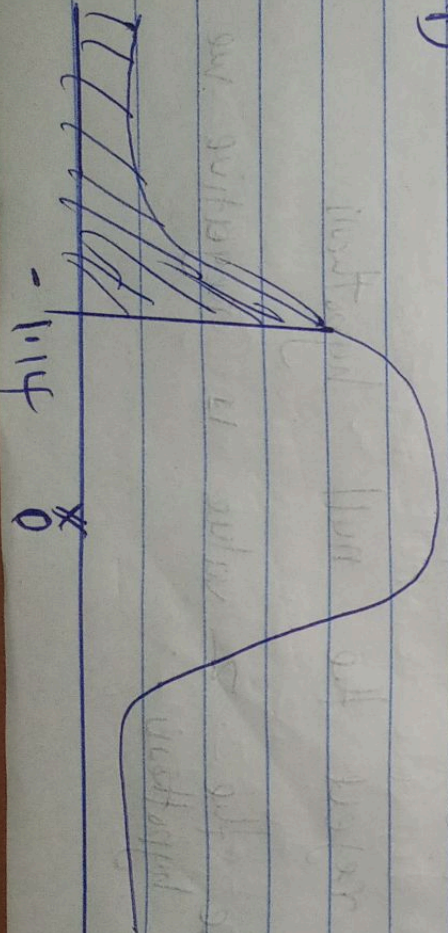
VII
1) H_0 : Mind fulness Condition

H_1 : physical therapy conditions.

2) One tailed t-test $\alpha = 0.05$

3) The type of design is to determine the level of pain
between patient with mind fulness condition and physical
therapy condition

II

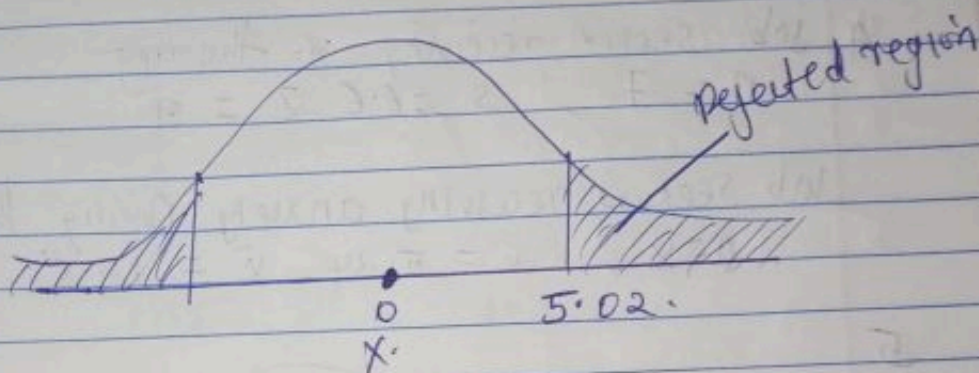


VI
1) H_0 : Gestermine sugar pill.
 H_a : placebo sugar pill.

2) One tailed - t - test $\alpha = 0.01$

3) The design of the study is to determine the supplement that is effective between Gestermine and placebo sugar pill.

5.

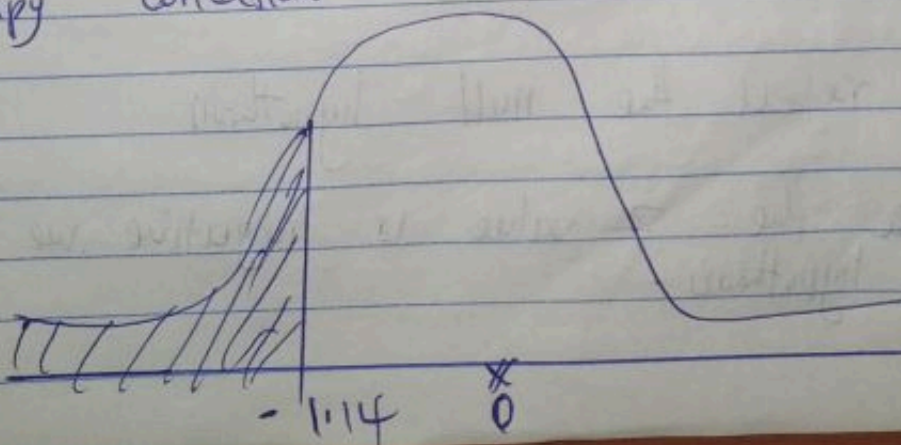


VII
1) H_0 : Mindfulness Condition
 H_a : physical therapy condition

2) One tailed t-test $\alpha = 0.05$

3) The type of design is to determine the level of pain between patient with mindfulness condition and physical therapy condition

II



1) H_0 : First-born sibling.
 H_a : later-born sibling.

2 One tailed - t - test $\alpha = 0.05$.

3 The type of design is to determine the impact of the birth order of sibling on the percentage likelihood that they will end up in art-related careers.

5.

