Psyc 003 Exam.

Q1

1) H_0: Common Anti-Depressant drug.
H_A: Euphoria drug

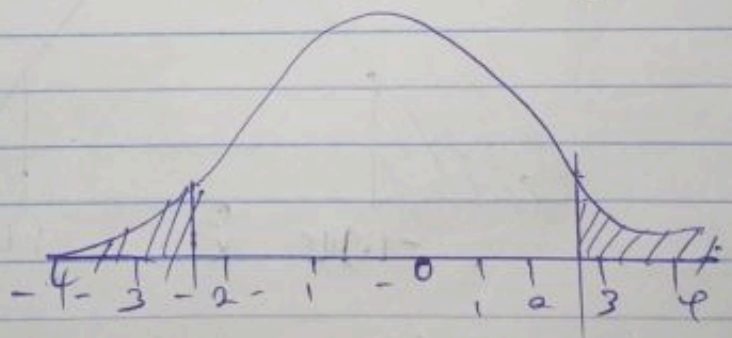
2) Two Sample t-test at α 0.025

3) The design for this study is to Compare Euphoria drug Compare to the most Common anti-depressant on the market for people suffering from mild depression.

4 Sample size $n = 7$.
Mean for Ant-Depressant drug. $U_1 = 47.14$
Standard deviation for ant-Depressant drug. = 5.34

Mean for Euphoria drug $U_2 = 43.57$
Standard deviation for Euphoria drug. = 6.24.

5



6 $$z = \frac{47.14 - 43.57}{\frac{5.34}{\sqrt{7}}} = \frac{3.57}{14.13} = 0.25$$

7 $z > 0.25$

8 In Conclution Euphoria drug is efficient for the individual suffering from mild depression than Anti-Depressant.

Exam 3 (Q2)

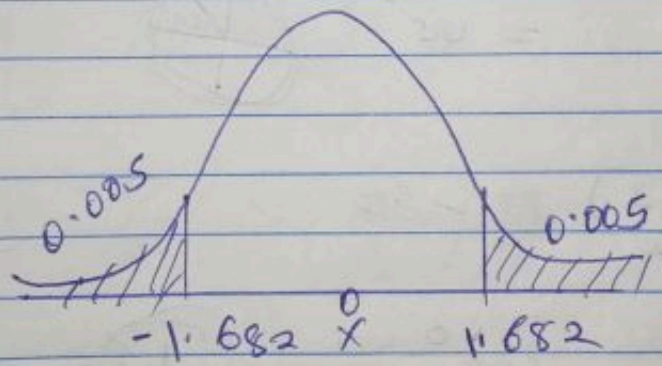
1) H_0 : latest batch of beer.
H_a : old batch of beer.

2 Two Sample t-test at $\alpha = 0.01$

3 The design for the study is to determine the level of alcohol between the latest and old batch of beer.

4 $\bar{x} = 7.2$
$s = 0.6$
$\mu = 7.5$
$n = 14$

5



6. $z = \frac{7.5 - 7.2}{\frac{0.6}{\sqrt{14}}} = \frac{0.3}{2.245}$ 0.1337

7) Reject the null hypothesis.

8 Inconclution we reject the null hypothesis that the latest batch of guinness beer had different level of alcohol content that the old batch of beer.

Q3.

1) H_0 : Individual motivation.
H_a : Group motivation.

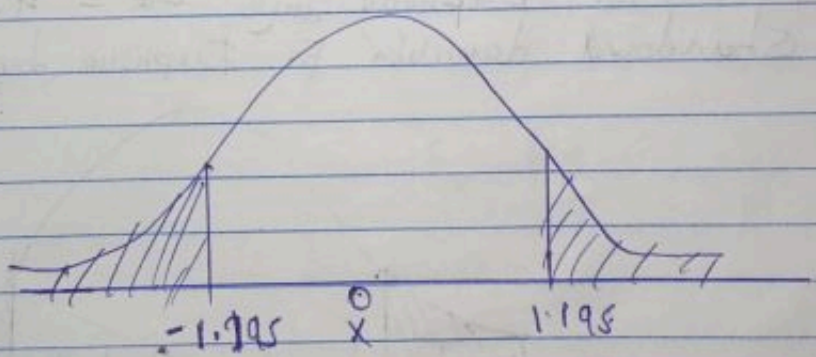
2 Hypothesis test $\alpha = 0.05$

3 The design of study is to determine the efficient type of motivation on performance of simulated clerical task.

4 Mean for Individual motivation = 12.4
standard deviation = 2.67

Mean for Group motivation = 10.6.
standard deviation = 3.27

5.



6 $Z = \frac{3.27 - 2.67}{1.195\sqrt{10}} = \frac{0.6}{3.779} = 0.158$

7) Reject the null hypothesis

8) In conclution we reject the null hypothesis because Individual motivation is more likely to be efficient and Z value is more than 0.

Q4.

1) Ho : mixed - breed dogs.
Ha : pure breed dogs.

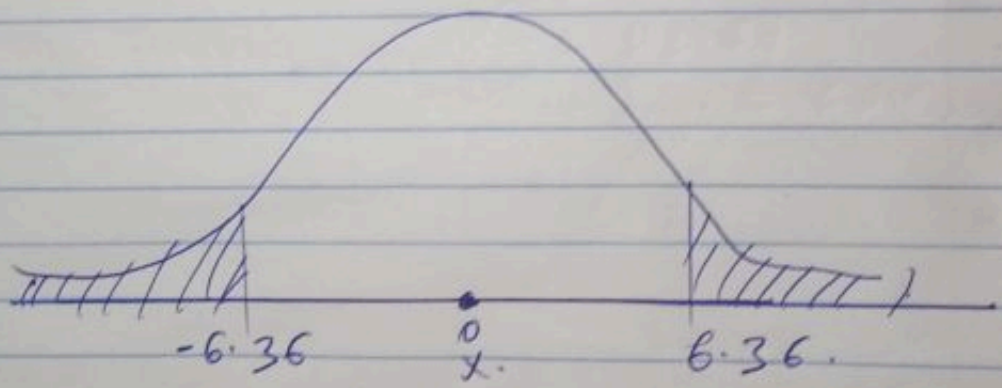
2. Hypothesis testing $\alpha = 0.01$

3 The type of design for the study is to determine which breed of dogs have fewer serious illness between pure breed and mixed breed dogs.

4 mixed breed $\sigma = 3.5$
$n = 31$, $\bar{x} = 2.5$, $s = 3.0$

pure breed $n = 30$, $\bar{x} = 2.9$, $s = 3.3$ $\sigma = 3.2$.

5



6. $z = \frac{2.9 + 2.5}{3.5\sqrt{3.3 - 3.0}} = \frac{0.4}{1.917} = -0.21$

7 Accept the null hypothesis.

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