



Student Name.....ID:..... Group:37041 A

Quiz -1

Question: The following are the burning times of chemical flares of two different formulations. The design engineers are interested in both the means the burning times.

Type 1		Type 2	
65	82	64	56
81	67	71	69
57	59	83	74
66	75	59	82
82	70	65	79

- (a) Test the hypotheses that the mean burning times are equal. Use $\alpha = 0.05$. What is the P-value for this test?

$$H_0: \mu_1 = \mu_2 \quad H_1: \mu_1 \neq \mu_2$$

P-value = 0.962

Then accept the null hypothesis

- (b) Conclusion:

From test of the experiment we get that the two mean burning times are equals.

- (c) Find a 95 percent confidence interval on the difference in the mean burning of the two different formulations.

95% CI for difference: (-8.59, 8.99)



Student Name.....ID:..... Group: 37041 ... B

Quiz -1

Question: The following are the burning times of chemical flares formulations. The design engineers are interested in the means burning times.

Burning Time	
65	82
81	67
57	59
66	75
82	70

- (a) Test the hypotheses that the mean burning times are exceeds 70. Use $\alpha = 0.05$. What is the P-value for this test?

$$H_0: \mu = 70 \quad H_1: \mu > 70$$

P-value = 0.447

Then accept the null hypothesis

- (b) Conclusion:

From test of the experiment we get that the mean burning times is greater than 70.

- (c) Find a 95 percent confidence interval on the difference in the mean burning formulations.

95% CI for difference: (63.77, 77.03)



Student Name.....ID:..... Group:..... C

Quiz -1

Question: The following are the burning times of chemical flares formulations. The design engineers are interested in the means burning times.

Burning Times	
65	82
81	67
57	59
66	75
82	70

- (a) Test the hypotheses that the mean burning times are less than 65. Use $\alpha = 0.05$. What is the P-value for this test?

$$H_0: \mu = 65 \quad H_1: \mu < 65$$

$$P\text{-value} = 0.951$$

Then accept the null hypothesis

- (b) Conclusion:

From test of the experiment we get that the mean burning times is less than 65.

- (c) Find a 95 percent confidence interval on the difference in the mean burning formulations.

$$95\% \text{ CI for difference: } (63.77, 77.03)$$