Pre-Calculus Multiple Choice Questions - Chapter S7

1 The rejection criterion should always be set

a Before starting the statistical analysis
b After starting to collect data
c After setting the sample size
d Before starting anything

	S7.1

2 The rejection criterion is represented by which letter?

a α
b β
c γ
d δ

	S7.1

3 The null hypothesis must always include which symbol?

a Δ
b $\neq$
c ^{2}
d $=$

	S7.1

Pre-Calculus Multiple Choice Questions - Chapter S7

1 Which of the following is a null hypothesis?

a $\mu < 12$ **b** $\mu > 12$

c $\mu = 12$ **d** $\mu \neq 12$

	S7.2

2 If the p-value is less than the rejection criterion, then you should _____ the null hypothesis.

a Accept **b** Reject

c Both **d** None of the above

	S7.2

3 Which of the following is a two-tailed alternative hypothesis?

a $\mu < 12$ **b** $\mu > 12$

c $\mu = 12$ **d** $\mu \neq 12$

	S7.2

Pre-Calculus Multiple Choice Questions - Chapter S7

1 With a type I error the alternative hypothesis is always

a True **b** False

c Neither **d** Both

S7.3

2 With a type I error the null hypothesis is always

a True **b** False

c Neither **d** Both

S7.3

3 Which of the following is a commonly acceptable probability of a type I error?

a 5% **b** 15%

c 30% **d** 50%

S7.3

1 With a type II error the alternative hypothesis is always

a True **b** False

c Neither **d** Both

S7.3

2 With a type II error the null hypothesis is always

a True **b** False

c Neither **d** Both

S7.3

3 Which of the following is a commonly acceptable probability of a type II error?

a 5% **b** 15%

c 30% **d** None of the above

S7.3

1 The probability of a type II error is

a α **b** β

c γ **d** δ

S7.3

1 The probability of a type I error is

a α **b** β

c γ **d** δ

S7.3

	S7.3

2 The domain of α and β is

a [0, 1)

b [0, 1]

c (0, 1]

d (0, 1)

Pre-Calculus Multiple Choice Questions - Chapter S7

1 The mayor of a large city will run for governor if he beileves that more than 30 percent of the voters in the state already support him. He will have a survey firm ask a random sample of n voters whether or not they support him. He will use a large sample test for proportions to test the null hypothesis that the proportion of all voters who support him is 30 percent or less against the alternative that the percentage is higher than 30 percent. Suppose that 35 percent of all voters in the state actually support him. In which of the following situations would the power for this test be the highest?

		S7.4

a The mayor uses a significance level of 0.01 and n = 250 voters
b The mayor uses a significance level of 0.01 and n = 500 voters
c The mayor uses a significance level of 0.01 and n = 1000 voters
d The mayor uses a significance level of 0.05 and n = 500 voters
e The mayor uses a significance level of 0.05 and n = 1000 voters

3 Statistical power is equal to

		S7.4

a $\beta + 2$ **b** $\beta - 1$
c $1 + \beta$ **d** $1 - \beta$

3 Power will _____ as the difference between the actual and hypothesized values of the parameter increases

		S7.4

a Increase **b** Decrease
c Not change **d** Can't Determine