

08/06/2019

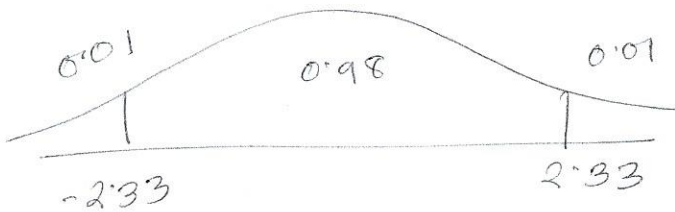
q.a

$$n = \left(\frac{2426}{E} \right)^2$$

$$\sigma = 16100$$

$$E = 2000$$

$$22/2 = 2.33$$



$$n = \left(\frac{2.33 * 16100}{2000} \right)^2$$

$$n = 352$$

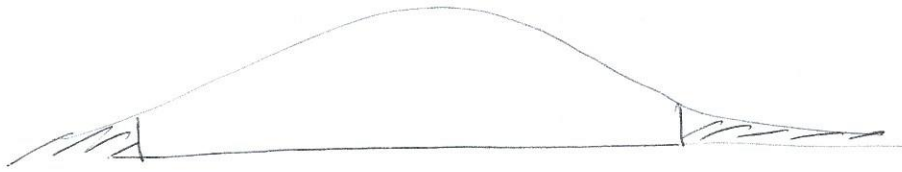
352 chevy cars are needed in a sample to estimate the mean # of miles with 98% confidence within 2000 miles.

$$b) n = \left(\frac{2.33 * 16100}{1000} \right)^2$$

$$= 1408$$

Null: H_0 : always " $=$ "

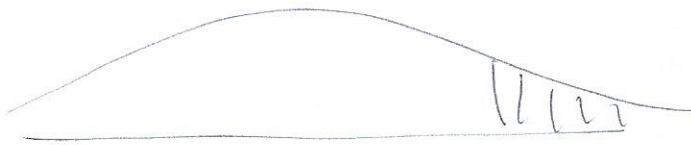
alt: H_1 : always " $</>/\neq$ "
or



two tails



less than } one tail.



greater than

Example 1

H_0 : $\mu = 500$ hrs

H_1 : $\mu < 500$ hrs

Example 2

H_0 : $\mu = 36.7$ yrs

H_1 : $\mu \neq 36.7$ yrs

$H_0: P = 78.2\%$ $p = 0.782$

$H_1: P > 78.2\%$

right tailed.

Reject H_0 in fact H_0 is true \rightarrow correct

Don't reject H_0 in fact H_1 is true \rightarrow correct

Reject H_0 ... in fact H_0 is true \rightarrow Type I error

Don't reject H_0 ... in fact H_1 is true \rightarrow Type II error.

Type I error:

we reject that the lifetime of a lightbulb is 500 hr.

Type II error:

the lifetime of a lightbulb is 500 when in fact it was less than 500 hrs.

$H_0: P = 78.2\%$

$H_1: P > 78.2\%$

type I: we found out that 1% of 12-19 years old trends at the boarding school get ~~more than 78.2%~~ the USDA's protein is above 78.2%.

when in fact it has 78.2%

Type II: we found out 78.2% at the school
who set USDA's protein is 78.2%. when
in fact in way above 78.2%.

H_0 is rejected \Rightarrow Enough evidence to support H_1 .

H_0 is not rejected \Rightarrow Not enough evidence to support H_1
Insufficient.

a) $H_0: \mu = 518$

$H_1: \mu > 518$ (Right-tailed)

b) Since we fail to reject H_0 , we believe that
the mean score on SAT Math Reg exam is still
518.
the test is not significant.

a) $H_0: p = 10.7\%$

$H_1: p > 10.7\%$

(right tailed)

b) Since there is sufficient sample evidence to reject H_0 , we believe that more than 10.7% of American of 65 yrs of age ~~are~~ are internate today.

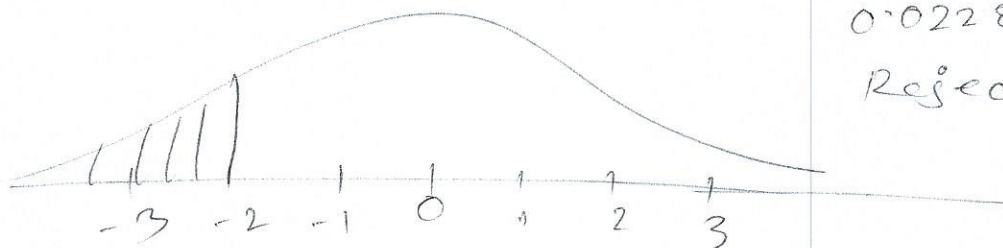
the test is significant.

a) $\alpha = 0.05$

$z = 2.00$

$H_0: p = 0.5$

$H_1: p < 0.5$



$0.0228 < 0.05$

Reject H_0 ,

