Hypothesis Testing

1.

null Hypothesis : $H_0 : \mu = 46$

Alternative Hypothesis : $H_a : \mu \neq 46$

$$\sigma = \frac{S}{\sqrt{n}} = \frac{384}{\sqrt{384}} = 2.3$$

→ Level of Signification : $\alpha = 0.05$

So, here is two tail Test means

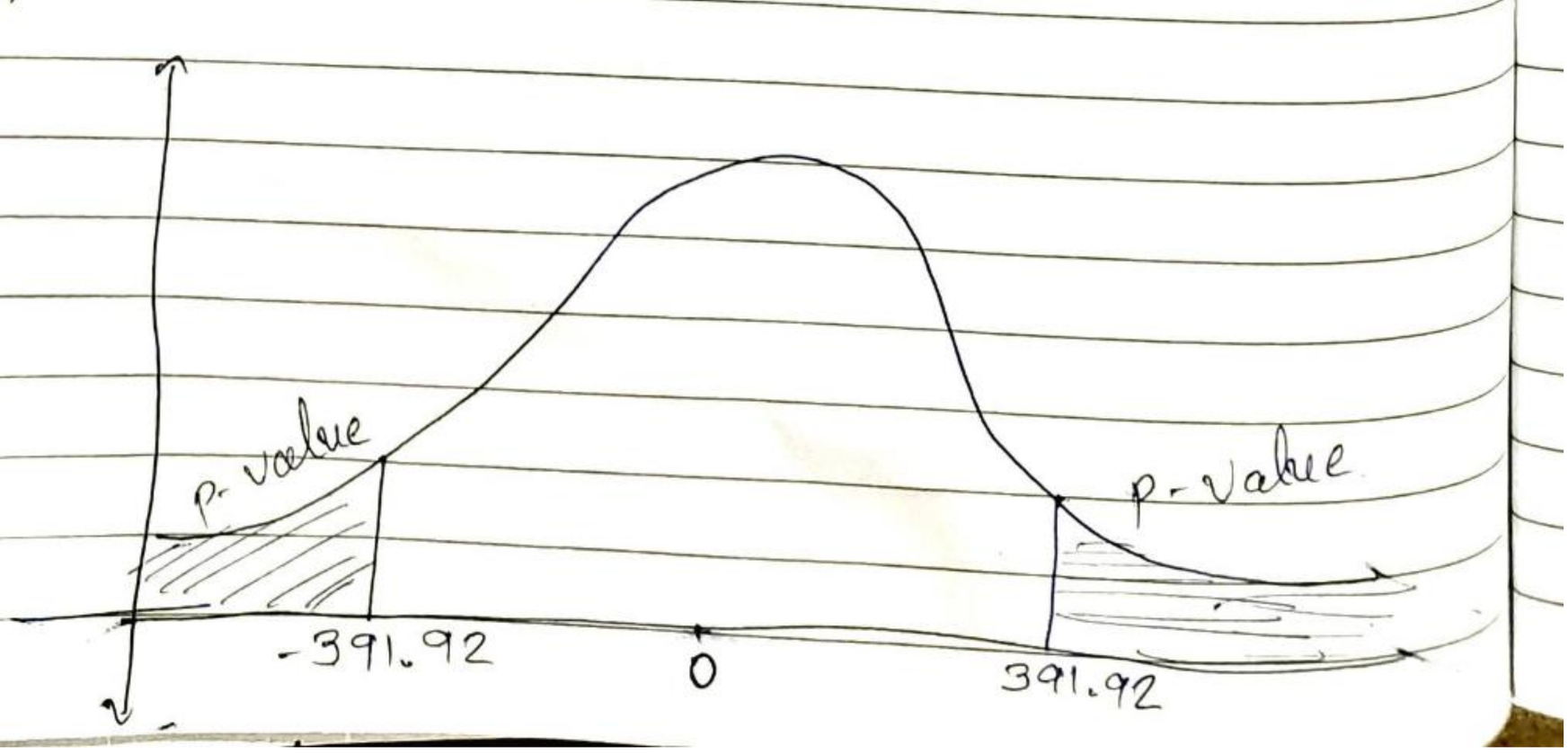
$$\frac{\alpha}{2} = 0.025$$

→ Test statistic :-

$$z = \frac{\bar{x} - \mu_0}{\sigma/\sqrt{n}}$$

$$= \frac{-46}{2.3/\sqrt{384}} = -391.92$$

→ p - Value :-



→ for −391.9 in 0.025 value is 0.000

p-value = 2 × P(Z ≤ −39.92)

= 2 × 0.000

= 0.000

So. Here, p-value is less than α value

p-value ≤ α

0.000 ≤ 0.05

We will reject the null hypothesis

→

Conclusions- Reject Ho = 46.

that mean μ ≠ 46.

→ Action:

It is prove that average of nation's children are suffering from the autism, due to increasing certain chemicals in the environment

→ Conclusions :

Goverment should strict with the environment maintaining laws. Companies and factories have their measurment of the wastage and chemical restriction. They should follow the rules for environment protection. Every companies and factory should grow the trees. for protection of our environment.