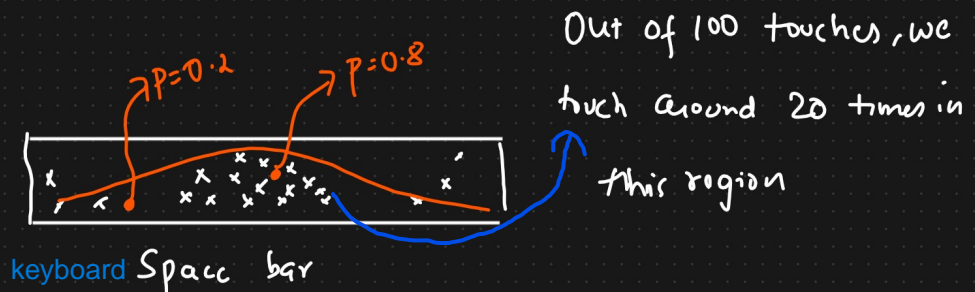


P value

The p value is a number, calculated from a statistical test, that describes **how likely you are to have found a particular set of observations if the null hypothesis were true**. P values are used in hypothesis testing to help decide whether to reject the null hypothesis.



Hypothesis Testing

Eg: Coin is Fair or Not {100 times}

① Null Hypothesis:

H_0 : Coin is fair

$$p(H) = 0.5 \quad p(T) = 0.5$$

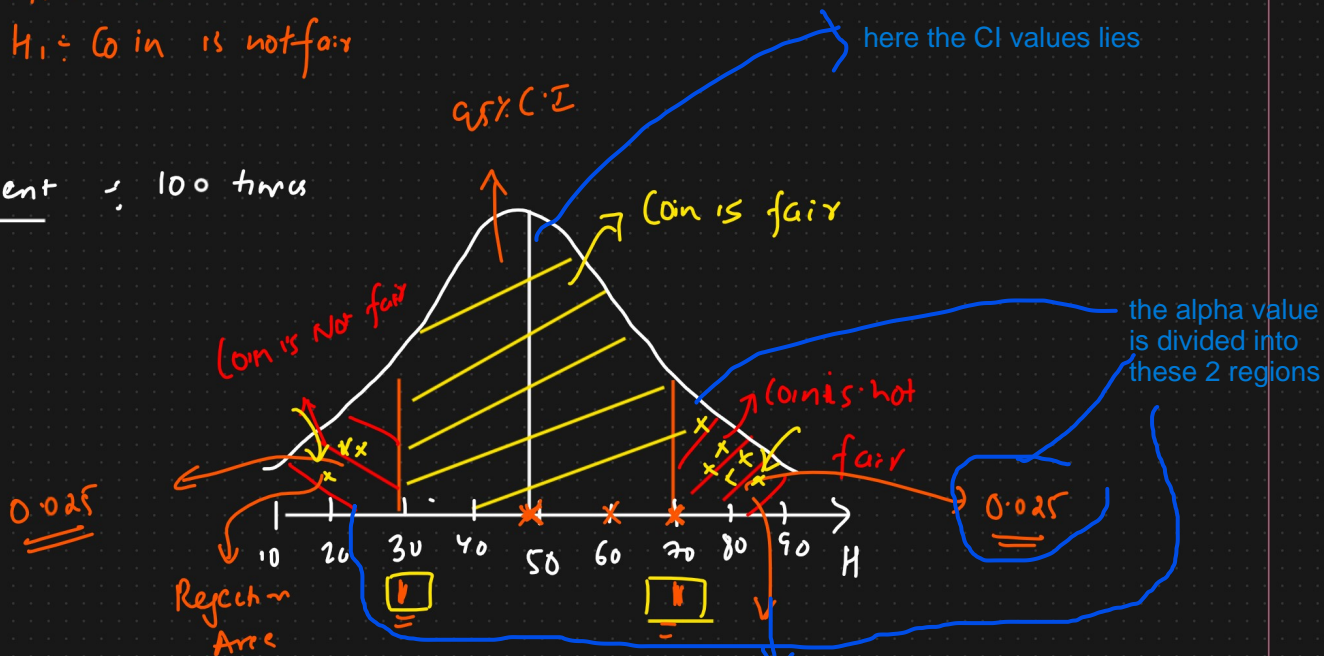
$$p(H) = 0.6 \quad p(T) = 0.4$$

$$p(H) = 0.7 \quad p(T) = 0.3$$

② Alternate Hypothesis:

H_1 : Coin is not fair

③ Experiment: 100 times



④ Significance Value $\Rightarrow \alpha = 0.05 \leftarrow$

confidence interval $\rightarrow C.I = 1 - 0.05 = 0.95$

⑤ Conclusion

$p < \text{Significance value}$ (30-70) \rightarrow or greater than SV

alpha value is defined for different problem statements

...we Reject the Null Hypothesis

else

Fail to Reject the Null Hypothesis

will see in further videos
how to calculate the p values