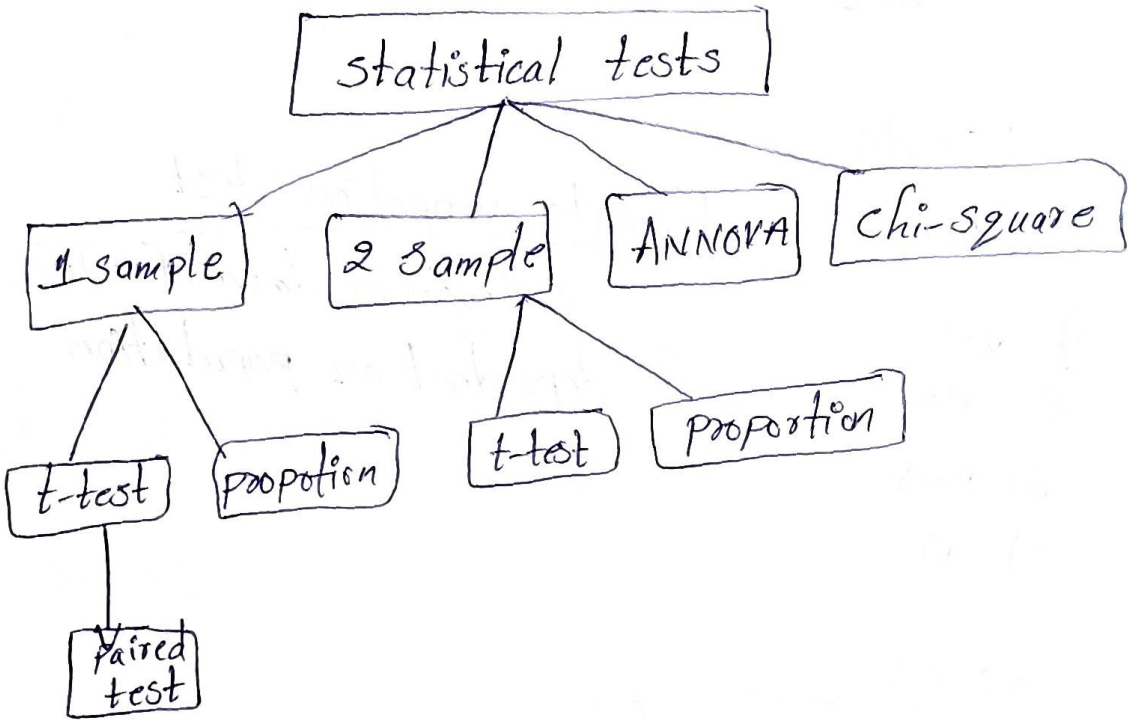
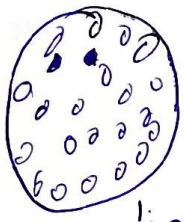
statistical tests



Sample t



Sample t

1) 28K
2) 35K
3) 18K
4) 50K.

100 > 32K.

Two tail

Ho sal = 27K

HA, sal ≠ 27K

2-tail test.

Ho :- The avg sal of IT Emp is 27K.

HA :- ..No.. No... is not 27K.

1 sample t test - Numerical data & countinous

depends on proportion.

The avg sal of IT Employee is 30K.

=> Ho : more than 70% of people are married in india.

HA : No more than 70% of people are not married in India.

$H_0 \geq 70\%$
$H_A < 70\%$ } one tail test.

1 sample

1) yes
2) yes
3) NO
4) yes
5) NO
.
.
.
100) yes

60% yes :- Married
40% No :- unmarid

1 sample propotion test

categorical data (Yes/NO)
dependent on population

⇒ H_0 :- Covidsheild is better than co-vaxin
H_A :- NO covidsheild is not better than co-vaxin

Co-vid sheild	Co-vaxin
Sample 1	Sample 2
1) 2hr	1) 3hr
2) 4hr	6.5hr
3) 1.5hr	4hr
4) 3hr	5hr
.	7hr
.	7.2hr
50) 5hr	
avg 3.5hr ✓	

2 Sample t test

Independent on population

So, we have to accept H_0
BC2, we got 5.5hr reaction time for covidsheild
7.2 hrs for co-vaxim.

⇒ H_0: New Beauty treatment is better than older one.
H_A: No the New Beauty treatment is not better than oldco one.

New Sample 1	old Sample 2
Yes	Yes
No	Yes
yes	Yes
No	No
:	Yes
yes	Yes
NO	NO
50% Yes	80% Yes
50% NO	20% No.

2 Sample proption

it is also independent on population.

We can reject the H_0
BC2 80% of people like older ~~treatment~~

⇒ ~~The~~ H_0:- ~~From~~ by Joining New weight loss program you can significant difference in your weight.

H_A:- No, ... there is no. significan difference in you weight.

Sample 1

	Before	After
1)	78	65
2)	93	81
3)	110	90
		68

4) 90   68 }

⋮   ⋮

16) 85   87

First 4, we can accept the H_0 bcz majority gt weight loss

1 Sample paired t test

t test

→ H_0:- your batch students can't able to score > 90M

H_A:- No My batch students are able to score > 90M

Ex:

	B1	B2	B3	B4	B5
	63	75	92	47	81
	62	88	98	58	75
	58	83	88	63	78
	73	65	89	70	85
	80	73	95	68	70
avg:-	65	78	92	59	80

Annova:

Analysis of Variance

If One sample proved means we can reject the H_0.

Ex:- In the 2000 indian census the age of individual in a small town where found to be the following.

In the year 2000

less than 18	18 - 35	> 35
20%	30%	50%