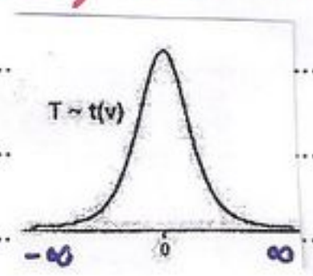
"Continuous probability distribution"

t-distribution of continuous r.v. T with parameter ν = df
(ν = df is degrees of freedom) i.e. T ~ t(ν):



" total area under the curve equals to 1"

① T is continuous random varible ($-\infty < T < \infty$).

② The shape of t-distribution is similar to the shape of the standard normal distribution and

t-distribution ⟶ standard normal distribution as $n \to \infty$

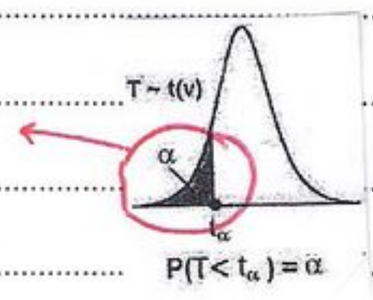
③ mean = 0

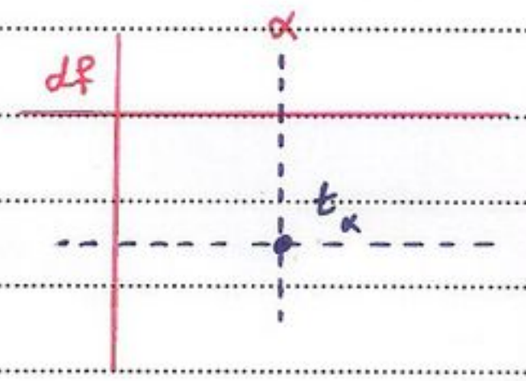
④ the curve is symmetric about the mean = 0.

⑤

$P(T < t_\alpha) = \alpha$ with degrees of freedom ν

the area left t_α is equals to α





as T is symmetric about 0, then $t_\alpha = -t_{1-\alpha}$.