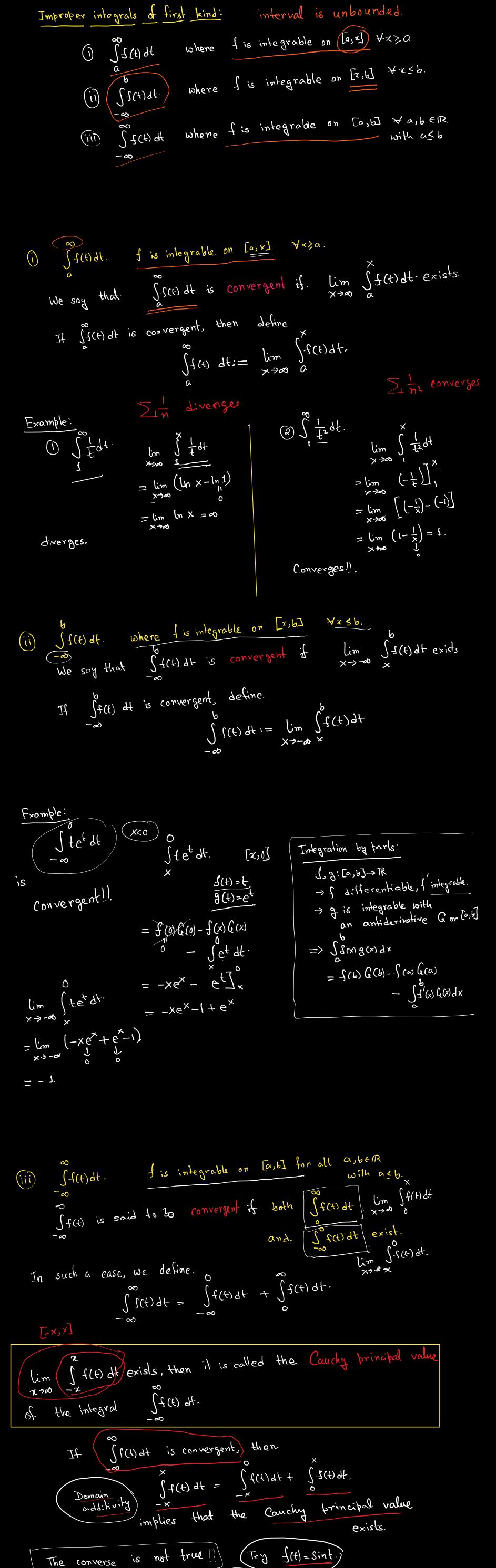
Improper integrals $f: [\alpha, b] \to \mathbb{R}$. f: bounded. $f: (\pi)d \times d$ What if we wanted to consider integrals of the form $\int_{C} \int_{C} \int_{$ SE(x)dx J'is unbounded?



 $\int_{1+t^2}^{x} \frac{1}{1+t^2} dt = \tan^{-1}(x) - \tan^{-1}(x)$

Example:

(b=1). (when is this integral convergent)

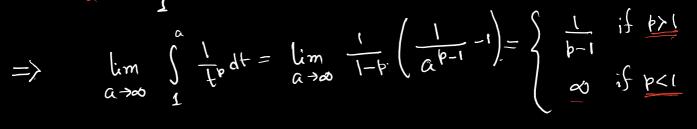
$$\int_{1}^{\infty} \frac{1}{t^{b}} dt.$$
(b=1). (when is this integral convergent)

(Þ#1)

Convergent if p>1.







 $\int_{a}^{a} \frac{1}{t^{p}} dt = \frac{t^{1-p}}{1-p} \int_{1}^{a} \frac{a^{1-p}-1}{1-p} = \frac{1}{1-p} \left(\frac{1}{a^{p-1}-1}\right)$