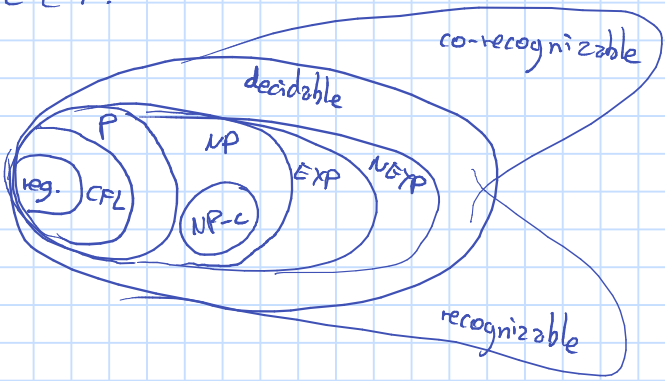
L27. 2022-11-23



Recall:

$L \in \Sigma^1$ if $L = \{x : \exists y \ \psi(x,y)\}$ where ψ is decidable.

$L \in NP$ if $L = \{x : \exists^P y \ V(x,y) \text{ accepts}\}$ where V is a poly-time TM.

Computability	→	(Time) Complexity
Decidable	→	Poly-time (P)
$\exists x$	→	$\exists^P y$ ($\exists y, \lvert y\rvert = \text{poly}$)
Recognizable (Σ^1)	→	NP