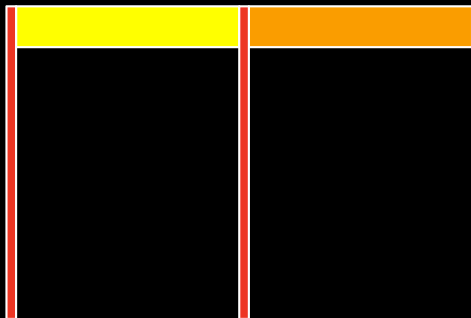
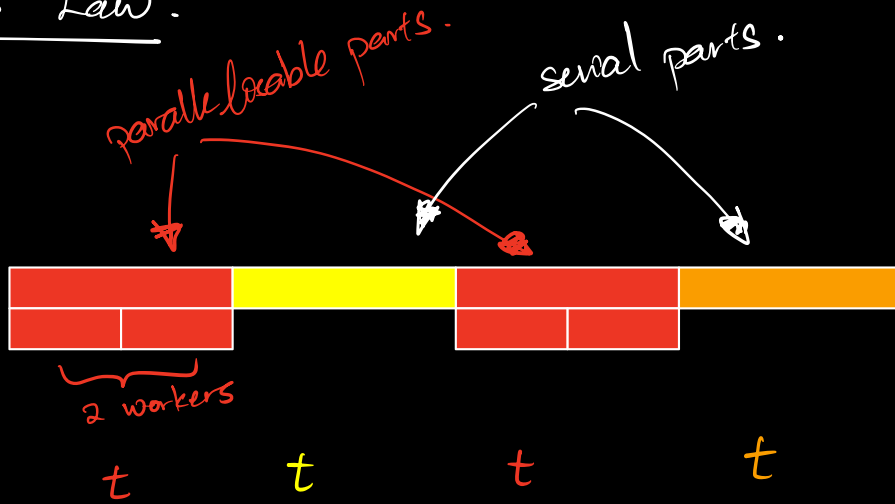


# Amdahl's Law.



If  $\alpha$  is the parallelisable proportion then parallelisation can at most remove time taken by that portion. So, speed up

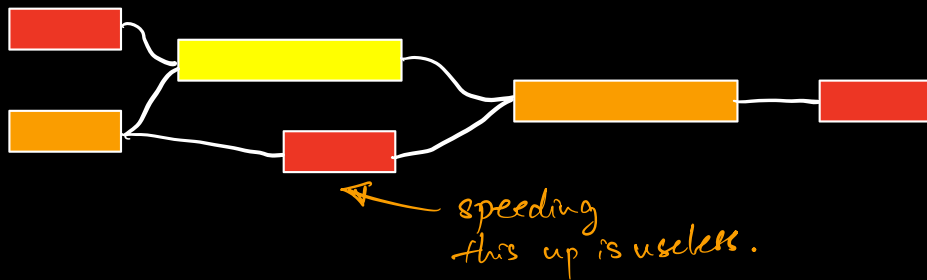
$$= \frac{\text{Total}}{\text{left over}} = \frac{1}{1 - \alpha}$$

max speed up

$$= \frac{T + T + T + T}{T + T}$$

$$= \frac{2T}{T + T} + 1$$

- \* Be careful about assumptions that goes into this.
- \* Speed up need not come from parallelisation.
- \* Multiple parts could get speed up of different amount.
- \* "Task dependency graph might not be linear"



Question :



Both are parallelisable, but you only have another worker to spare.  
which task should you parallelise?