

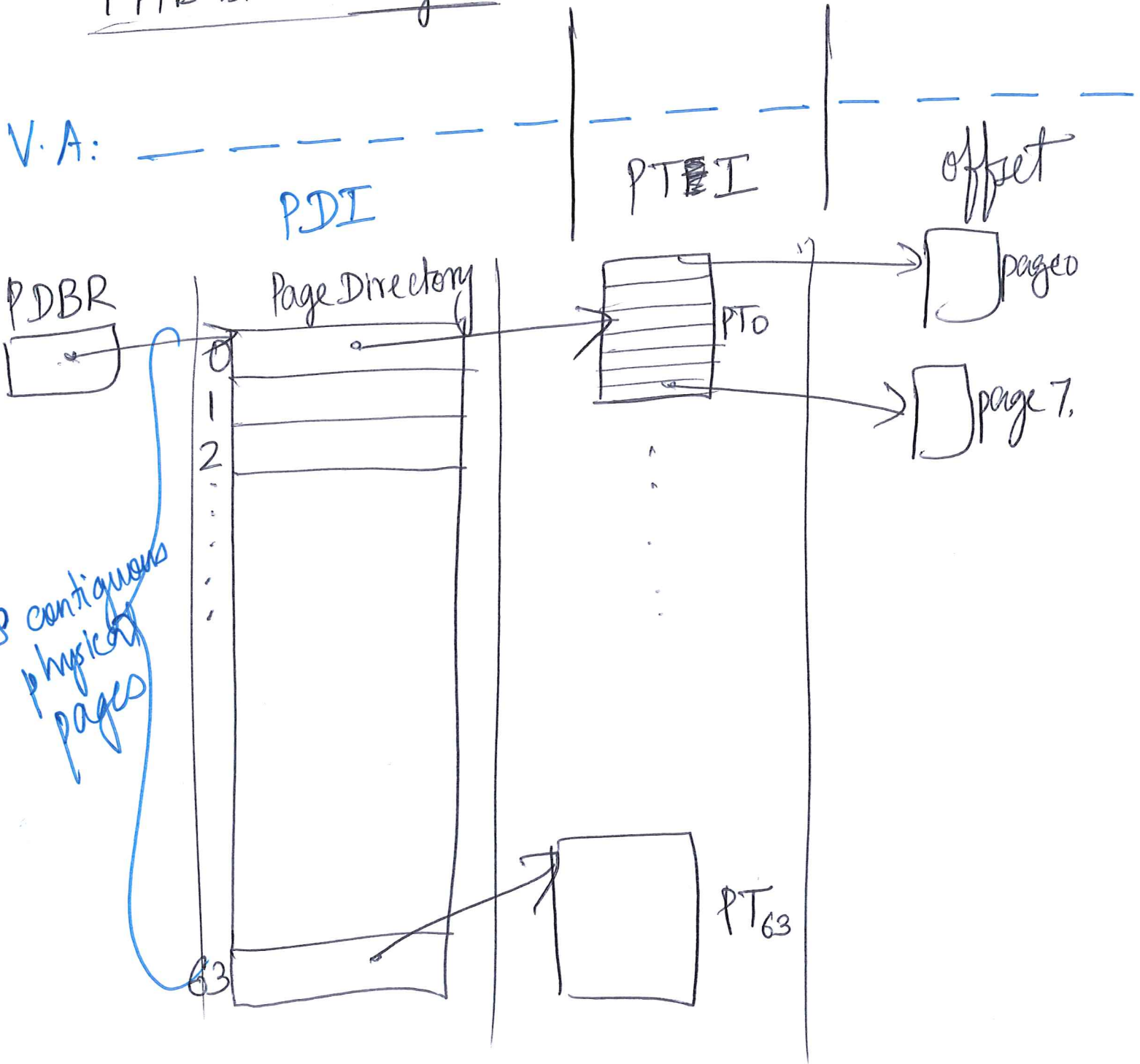
$$V.A. \text{ size} = \cancel{1 \text{ KB}} \quad 8 \text{ KB} = 2^3 \times 2^{10} = 2^{13}$$

$$P.A. \text{ size} = 4 \text{ KB}$$

$$\text{page size} = 16 \text{ bytes}$$

$$1 \text{ PTE size} = 2 \text{ bytes.}$$

Issues with a 2-level
page table!



3-level Page Table

VA:

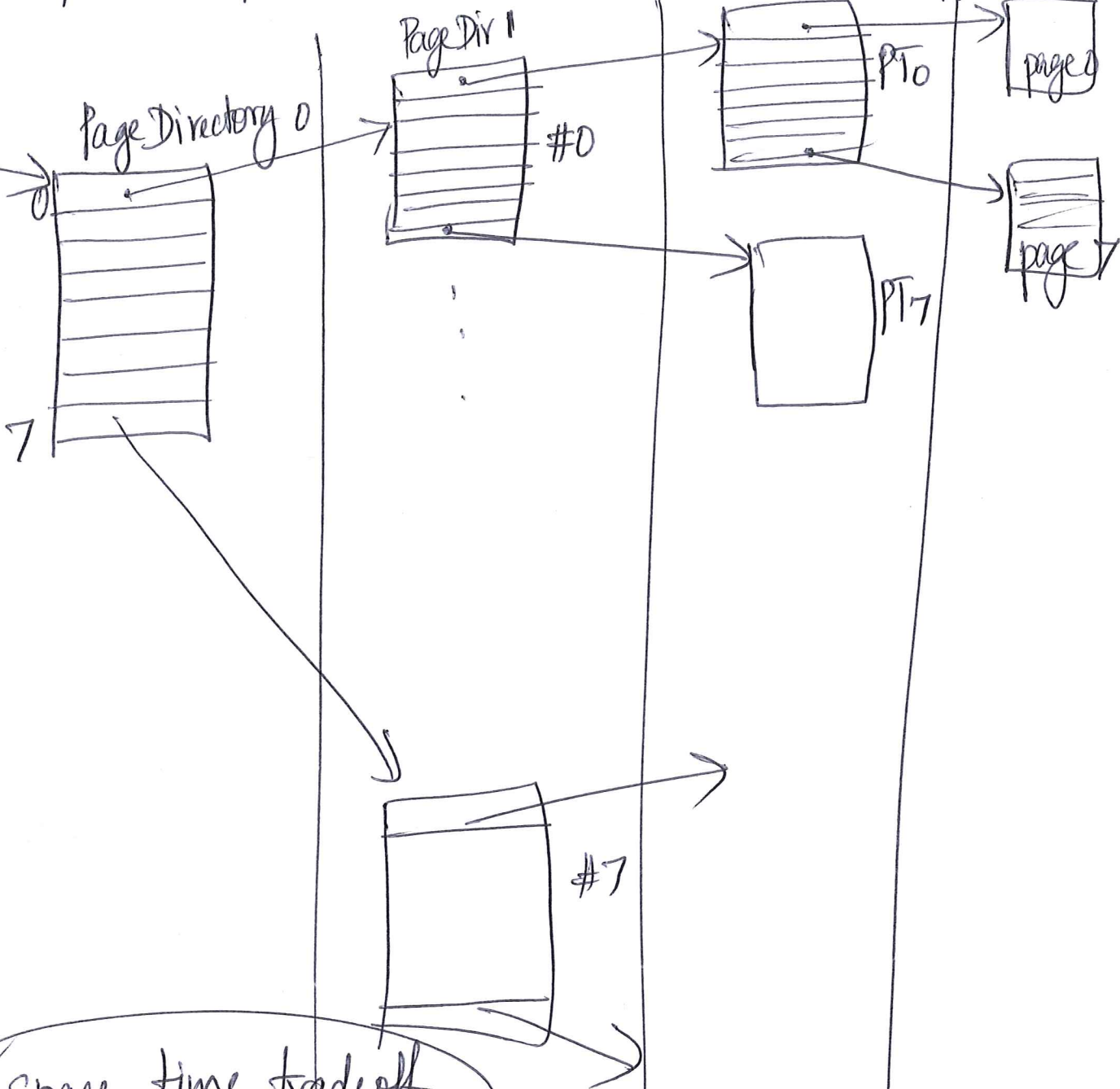
PDBR

PDI₀

PDI₁

PTI

offset



Space-time tradeoff

Inverted Page Tables

PFN	VPN
0	7
1	—
2	3
⋮	
⋮	
7	—

phys. mem = 4GB $\Rightarrow$

page size = 4KB

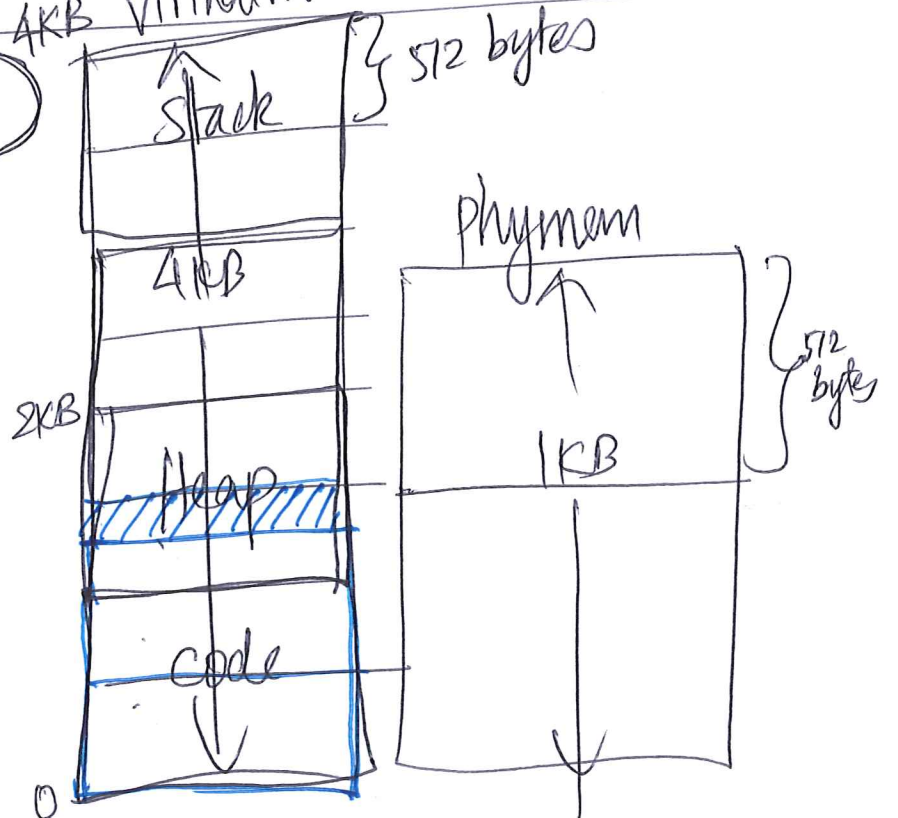
$$\# \text{ PFs} = \frac{4 \times 2^{30}}{4 \times 2^{10}}$$

$$= 2^{20}$$

V.A. Space = 4KB

P.A. Space = 1KB

4KB virtual mem



Swapping

RAM

