- Textbook v.6
- bring to each lab

30 85 grades
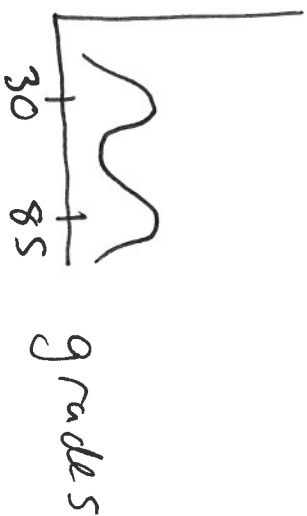
(diagrams) focus
- math

Jason - Harrison @ bcit.ca
SW 2 - 301

How to do well!
- read text before class
- questions
- no cheating
- 40% quizzes
- don't fall behind
- work together

- Web / Mobile
- Entrepreneurship

ch.

Diagrams: ① Pg 5, 18, 50 ☆   John von Neuman
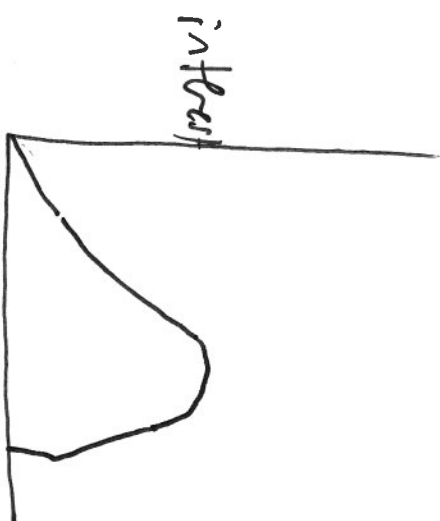
② Pg 57, 66, 75☆, 82, 89

Comp 1113 ③ 161, 164, 165, 167, 173,
176, 193☆, 195

④ 245, 292, 307

19 diagrams

interest

Reading: John von Neumann

quiz every week
at start of lab

First Quiz: Tuesday Jan 17

2510 albert genius
2121
2526 chris
2714   CST grad
Comm
2721
D'Arcy

Jan 10   Marina   SSD
         more RAM

faster
Computer

bit: 0 or 1

Byte: 8 bits

Word size: depends

Word: addressable unit
   eg address
     instruction
     value

register: word-sized memory inside the cpu

eg $\underline{32 \text{ bits}}$, 64 bits

$$2^{64} = 2^{32} \times 2^{32}$$

$$2^{32} = 2^2 \times 2^{30}$$
$$2^{32} = 4G$$
$$2^{18} = 256K$$
$$2^{14} = 16K$$
$$2^{24} = 16M$$
$$2^{38} \div 2^{12} = 64M$$

$$2^5 = 32$$
$$2^{25} = 32M$$
$$2^{35} = 32G$$
$$2^{36} = 64G$$

$$2^7 = 128$$
$$2^{10} = 1024 = 1 \text{ kilo}$$
$$2^{20} = 1 \text{ mega}$$
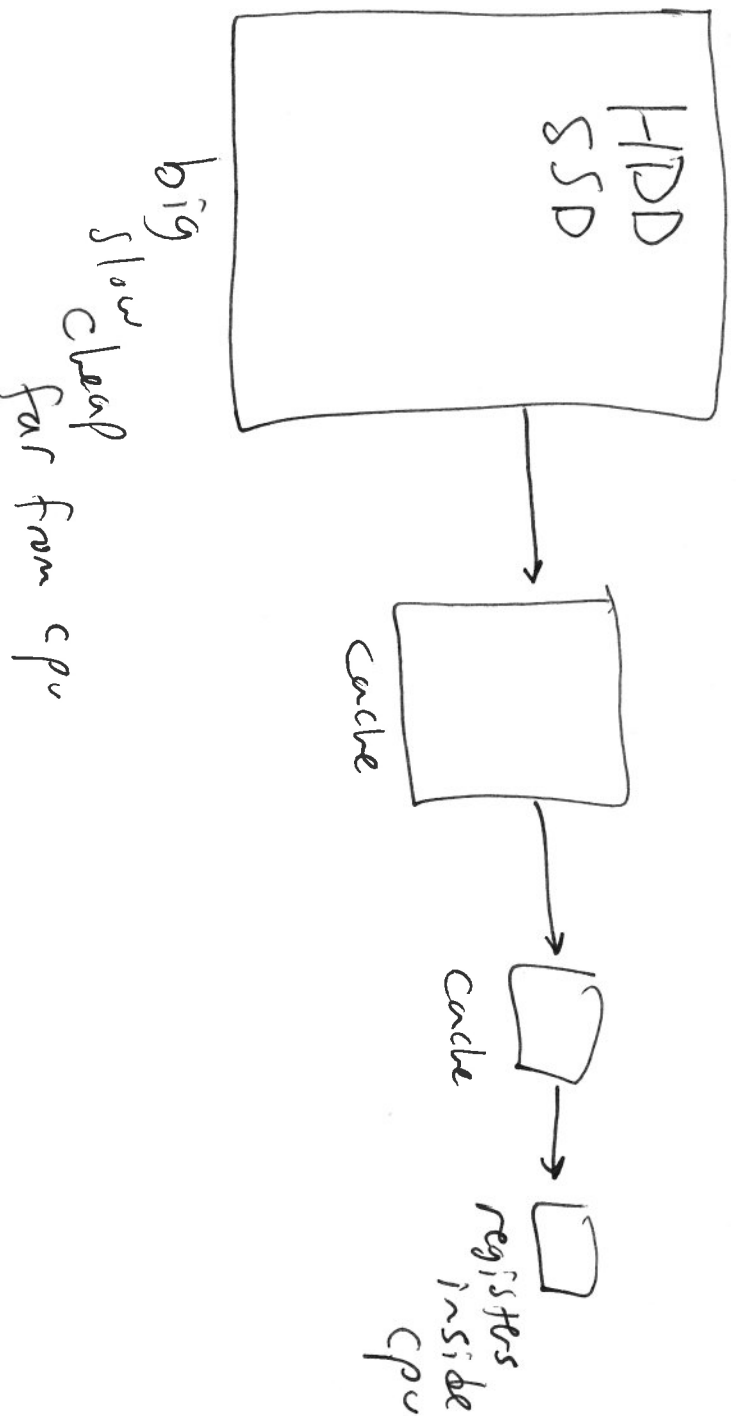$$2^{30} = 1 \text{ giga}$$
$$2^{40} = 1 \text{ tera}$$

QUIZ

bus: electrical pathway along which data passes between devices

cpu: central processing unit fetches, decodes, and executes instructions

HDD
SSD

big
slow
cheap
far from cpu

Cache

Cache

registers
inside
cpu

Lali: scan notes + send to set reps

Compilation: Converts instructions from some
high-level language all at once to
some lower-level language, which
is ultimately executable. Can discard the
original HLL code.

interpretation: Converts one HLL
program instruction to the
corresponding set of LLL instructions,
then repeat with the next HLL instruction.
Can't discard the original.

but Compiling is slow
its executable runs fast

interpretation is a slow process
but it can begin running sooner.

$$2^{13} \times 2^{14} = 128 M$$