Instruction ?   8 bit $\longrightarrow$ 1 word — Instruction size = 8 bits
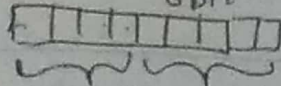
opcode size should be less than the memmory Address.
8 bit

opcode   Memory Address.   so the maximum size of opcode
4 bit   4 bit.   should be 4 bit.

b) How many Instructions can the CPU support?

$$2^8 = 256$$

2023/06/28

Tutorial ⑧.

2
↓
ASCII value

50
↓

Task
Ex:-   Add 2 + 4
          source
          Operand.

| 0 | 100 | 10 1 0 ← result operand
   Source operand

op   Memory
Code   Address

Result   } 6 ,,
Operand

(✻)   2   size of the opcode   =   No. of operations
                                           could be done.

(✻)   size of the Address field
      2   =   No) instruction address
                                 could be there for
                                     on instruction / task.
                               (How many memory addre

Quick Review Question @.

- Consider a computer that is used for simple numerical problems. It uses 6 bits for an opcode. and 12 bits for a memory address.

a) what is the size of its instruction.?

__18__ bits .

6 + 12

opcode + Address code .

b) How many different instructions can it have?

__2^6__ = ~~4096~~ 64 //

c) What is the maximum memory size that it can address ? $2^{12} = 4K$ (Hint : Assume that 2^{12} is about 4K)