Draw and ~~flow~~ explain the flowchart for the following instruction.

① sub instruction :

SUBTRACT 2, 179

$MAR \Leftarrow IC$

$MBR \Leftarrow M(MAR)$

$M(2)$.

$IR \Leftarrow MBR$

Test instruction type

subtract

$MAR \Leftarrow IR(address)$

$IR(179)$

$MBR \Leftarrow M(2)$

$WR \Leftarrow R(IR(2))$

$WR \Leftarrow WR - MBR$

$R(IR(2)) \Leftarrow WR$

$IC \Leftarrow IC+1$

1) Memory location of current instruction is stored in MAR (memory address register).

2) Read instruction from memory and stored MBR (memory Buffer register)

3). Put instruction in instruction register (IR)

4) choose test instruction type (SUBTRACT)

5) Read data from memory & stored in MBR

6) copy designed general register into worry (WR).

7) Lea ......... om in general register

8) In......... ction counter

② 

MULTIPLY 5, 189.

$$MAR \Leftarrow IC$$
$$MBR \Leftarrow M(MAR)$$
$$M(5).$$

$$IR \Leftarrow MBR$$

Test instruction type

multiply.

$$MAR \Leftarrow IR \text{ (address)}$$
$$IR(189)$$

$$MBR \Leftarrow M(5).$$
$$WR \Leftarrow R(IR(5)).$$
$$WR \Leftarrow WR * MBR$$
$$R(IR(5)) \Leftarrow WR$$
$$IC \Leftarrow I(+1)$$

1) Memory location of current instruction is stored in MAR (memory address register).

2) Read instruction from memory and stored MBR (memory Buffer register).

3) put instruction in instruction register (IR).

4) choose test instruction type (MULTIPLY).

5) Read data from memory and stored in MBR

6) perform operation (* Multiply).

7) copy designed general register into working register (WR).

8) Leave resulting ans in general register

9) increment instruction counter

$$(IR \Leftarrow IR + 1)$$