step: normal magnitude (no negative)
step 2: ~ number . flip bits
step 3: add 1

Question #3

A. Decimal → 8 bit 2's complement

1. $(124)_{10}$

124	62	31	15	7	3	1	0
0	0	1	1	1	1	1	←
2	2	2	2	2	2	2	

$(0111\ 1100)_{8\text{-bit 2's comp}}$

2. $(-124)_{10}$

$(1000\ 0100)_{8\text{-bit 2's complement}}$

```
 0111 1100   step 1
 1000 0011   step 2: flip bits
+0000 0001   step 3: add 1
-------------
 1000 0100
```

3. $(109)_{10}$

109	54	27	13	6	3	1	0
1	0	1	1	0	1	1	←
2	2	2	2	2	2	2	

~~$(0101\ 1011)_{8\text{-bit 2's complement}}$~~

$(0110\ 1101)_{8\text{-bit 2's complement}}$

4. $(-79)_{10}$

79	39	19	9	4	2	1	0
1	1	1	1	0	0	1	←
2	2	2	2	2	2	2	

```
 0100 1111
 1011 0000   ← step 2: flip bits
+0000 0001   ← step 3: add 1
-------------
 1011 0001
```

$(1011\ 0001)_{8\text{-bit 2's complement}}$