5) N_1 (100)$_{10}$

100 | 2
0 50 | 2
0 25 | 2
1 12 | 2
0 6 | 2
0 3 | 2
1 1 | 2
1 0

$N_1 = (1100100)_2$

$N_2 = (120)_{10}$

120 | 2
0 60 | 2
0 30 | 2
0 15 | 2
1 7 | 2
1 3 | 2
1 1 | 2
1 0

$N_2 = (01111000)_2$

$N_3 = (-63)_{10}$

63 | 2
1 31 | 2
1 15 | 2
1 7 | 2
1 3 | 2
1 1 | 2
1 0

$(00111111)_2 = 63$

$N_3 = (11000001)_2$

$N_4 = (-56)_{10}$

56 | 2
0 28 | 2
0 14 | 2
0 7 | 2
1 3 | 2
1 1 | 2
1 0

$(00111000)_2 = 56$

$N_4 = (11001000) = -56$

$N_5 = (-91)$

91 | 2
1 45 | 2
1 22 | 2
0 11 | 2
1 5 | 2
1 2 | 2
0 1 | 2
1 0

$(01011011)_2 = 91$

$(10100101)_2 = -91$

a) 1) $N_1 + N_2$

```
  11
  01100100      CF=0
+ 01111000      OF=1
----------
  11011100
```

2) $N_3 + N_4$

```
  10000001      OF=0
+ 11001000      CF=1
----------
 (1)00001001 = (-119)10
```

3) $N_3 + N_5$

$$
\begin{array}{r}
1 \\
11000001 \\
10100101 \\
\hline
01100110
\end{array}
$$

CF=1

OF=1

4) $N_2 - N_4$

$$
\begin{array}{r}
01111000 \\
-\ 11001000 \\
\hline
10110000
\end{array}
$$

CF=1

OF=1

5) $N_5 - N_2$

$$
\begin{array}{r}
1111 \\
10100101 \\
-\ 01111000 \\
\hline
00101101
\end{array}
$$

CF=0

OF=1

b)