2. $45,001_{10} \rightarrow Base_2$

4	3	2	1	0
4	5	0	0	1
↓	↓	↓	↓	↓
100	101	000	000	001

$$1001010000000001_2$$

or

2^1	Value	Count	RT	REM	Binary
2^4	16				
2^3	8				
2^2	4				
2^1	2				
2^0	1				

PART B.

1. $1011001001110101_2 \rightarrow Base_{10}$

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
1	0	1	1	0	0	1	0	0	1	1	1	0	1	0	1

$(1\times2^{15})+(0\times2^{14})+(1\times2^{13})+(1\times2^{12})+(0\times2^{11})+(0\times2^{10})+(1\times2^{9})+(0\times2^{8})+(0\times2^{7})+(1\times2^{6})+(1\times2^{5})+(1\times2^{4})+(0\times2^{3})+(1\times2^{2})+(0\times2^{1})+(1\times2^{0})$.