

① Binary to Hexadecimal:

$(110010101010110)_2$

<u>0001</u>	<u>1001</u>	<u>0101</u>	<u>0101</u>	<u>0110</u>
↓	↓	↓	↓	↓
1	9	5	5	6

$(19556)_{16}$

② Hex to Binary: $(0A D D B)_{16}$

0	A	D	D	B
↓	↓	↓	↓	↓
0000	1010	1101	1101	1011

$(00001010110111011011)_2$

③

③ Decimal to Binary:

2	278345
2	139172-1
2	69586-0
2	34793-0
2	17396-1
2	8698-0
2	4349-0
2	2174-1
2	1087-0
2	543-1
2	271-1
2	135-1
2	67-1
2	33-1
2	16-0
2	8-0
2	4-0
2	2-0
2	1-0
	0-1

$(278345)_{10}$

$(1.0000.11111.01001.001)_{2}$

④ Binary to decimal: $(1100101001010110)_{2}$

$$1 \times 2^{16} + 1 \times 2^{15} + 0 \times 2^{14} + 0 \times 2^{13} + 1 \times 2^{12} + 0 \times 2^{11} + 1 \times 2^{10} + 0 \times 2^9 + 0 \times 2^8 + 1 \times 2^7 + 0 \times 2^6 + 1 \times 2^5 + 0 \times 2^4 + 1 \times 2^3 + 1 \times 2^2 + 1 \times 2^1 + 0 \times 2^0$$

$$= 65536 + 32768 + 4096 + 1024 + 128 + 32 + 8 + 4 + 2$$

$$= (103598)_{10}$$