

7/11/22

8.00

9.00

C++ Basics Assignment 1

10.00

Convert Decimal number (base 10)
to Binary number (base 2)

11.00

12.00

① 1234

1.00

 $2^{10} \quad 2^9 \quad 2^8 \quad 2^7 \quad 2^6 \quad 2^5 \quad 2^4 \quad 2^3 \quad 2^2 \quad 2^1 \quad 2^0$
 $1024 \quad 512 \quad 256 \quad 128 \quad 64 \quad 32 \quad 16 \quad 8 \quad 4 \quad 2 \quad 1$

2.00

 $1 \quad 0 \quad 0 \quad 1 \quad 1 \quad 0 \quad 1 \quad 0 \quad 0 \quad 1 \quad 0 \rightarrow 11 \text{ bits}$

3.00

 $1234 \Rightarrow 10011010010$

4.00

② 1960

5.00

 $2^{10} \quad 2^9 \quad 2^8 \quad 2^7 \quad 2^6 \quad 2^5 \quad 2^4 \quad 2^3 \quad 2^2 \quad 2^1 \quad 2^0$

6.00

 $1024 \quad 512 \quad 256 \quad 128 \quad 64 \quad 32 \quad 16 \quad 8 \quad 4 \quad 2 \quad 1$

7.00

 $1 \quad 1 \quad 1 \quad 1 \quad 0 \quad 1 \quad 0 \quad 1 \quad 0 \quad 0 \quad 0 \rightarrow 11 \text{ bits}$
 $1960 \Rightarrow 11110101000$

③ 2648

8.00

	2^{11}	2^{10}	2^9	2^8	2^7	2^6	2^5	2^4	2^3	2^2	2^1	2^0
9.00	2048	1024	512	256	128	64	32	16	8	4	2	1
10.00	1	0	1	0	0	1	0	1	1	0	0	0

11.00

$$2648 \Rightarrow 101001011000$$

12.00

④ 3

⑤ 17

1.00

	2^1	2^0
2.00	2	1
	1	1

	2^4	2^3	2^2	2^1	2^0
	16	8	4	2	1
	1	0	0	0	1

3.00

$$3 \Rightarrow 11$$

$$17 \Rightarrow 10001$$

4.00

5.00

⑥ 29

6.00

	2^4	2^3	2^2	2^1	2^0
7.00	16	8	4	2	1
	1	1	1	0	1

$$29 \Rightarrow 11101$$