

DSA HOME WORK

- 1, 1234
- 2, 1960
- 3, 2648
- 4, 3
- 5, 17
- 6, 29

Solutions

① 1 2 3 4 — Considering 10-bits

2^{10}											2^0
1024	512	256	128	64	32	16	8	4	2	1	
1	0	0	1	1	0	1	0	0	1	0	

$$1234_{10} = 10011010010_2$$

② 1960 — Considering 10-bits

1024	512	256	128	64	32	16	8	4	2	1	
1	1	1	1	0	1	0	1	0	0	0	

$$1960_{10} = 11110101000_2$$

③ 2648 — Considering 11-bits

2048	1024	512	256	128	64	32	16	8	4	2	1
1	0	1	0	0	1	0	1	1	0	0	0

$$2648_{10} = 101001011000_2$$

④ 3 — Considering 2 bits

2^2		2^0
4	2	1
0	1	1

$$3_{10} = 011_2$$

⑤ 17 — Considering 4 bits

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

$$17_{10} = 10001_2$$

⑥ 29 — Considering 4 bits

16	8	4	2	1	
1	1	1	0	1	

$$29_{10} = 11101_2$$