

Practice Problem 2.1 (solution page 179)

Perform the following number conversions:

- A. **0x2589D2** to binary
- B. binary 1010111001001001 to hexadecimal
- C. **0xA883D** to binary
- D. binary 1100100010110110010110 to hexadecimal

Hex digit	0	1	2	3	4	5	6	7
Decimal value	0	1	2	3	4	5	6	7
Binary value	0000	0001	0010	0011	0100	0101	0110	0111
Hex digit	8	9	A	B	C	D	E	F
Decimal value	8	9	10	11	12	13	14	15
Binary value	1000	1001	1010	1011	1100	1101	1110	1111

Figure 2.2 Hexadecimal notation. Each hex digit encodes one of 16 values.

- A. $0x2589D2$
 0 0 1 0 0 1 0 1 1 0 1 1 0 0 1 1 0 1 0 0 1 0
- B. $0xA8E49$
 1 0 1 0 1 1 1 0 0 1 0 0 1 0 0 1
 ← need to start from the right
- C. $0xA8B3D$
 1 0 1 0 1 0 0 0 1 0 1 1 0 0 1 1 1 0 1
- D. $0x322D96$
 0 0 1 1 0 0 1 0 0 0 1 0 1 1 0 1 1 0 0 1 0 1 1 0
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