

190410102 方亮 自动化1班

补充: $(01111001)_{BCD} = (79)_D = (1001111)_B$

1.1 $\log_2 600 = 9.2$ 故至少要十位二进制代码.

$\log_8 600 = 3.07$ 故至少要 4 位八进制代码.

$\log_{16} 600 = 2.31$ 故至少要 3 位十六进制代码.

1.4 (4) $(1001.0101)_2 = 1 \times 2^3 + 1 \times 2^0 + 1 \times 2^{-2} + 1 \times 2^{-4} = 9.3125$

1.5 (4) $(101100.110011)_2 = (54.63)_8 = (2CC3)_{16}$

1.9 (1) $(25.7)_{16} = (11001.1011)_B = (19.B333)_{16}$

$$\begin{array}{r} 2 \overline{) 25} 1 \\ 2 \overline{) 12} 0 \\ 2 \overline{) 6} 0 \\ 2 \overline{) 3} 1 \\ 2 \overline{) 1} 1 \end{array}$$

$$\begin{array}{l} 0.7 \times 2 = 1.4 \quad 1 \\ 0.4 \times 2 = 0.8 \quad 0 \\ 0.8 \times 2 = 1.6 \quad 1 \\ 0.6 \times 2 = 1.2 \quad 1 \end{array}$$

$$\begin{array}{r} 16 \overline{) 25} 9 \\ 16 \overline{) 1} 1 \end{array}$$

$$\begin{array}{l} 0.7 \times 16 = 11.2 \\ 0.2 \times 16 = 3.2 \\ 0.2 \times 16 = 3.2 \\ 0.2 \times 16 = 3.2 \end{array}$$

1.2 (1) $(188.875)_{10} = (10111100.1110)_B = (BC.E000)_{16}$

$$\begin{array}{r} 2 \overline{) 188} 0 \\ 2 \overline{) 94} 0 \\ 2 \overline{) 47} 1 \\ 2 \overline{) 23} 1 \\ 2 \overline{) 11} 1 \\ 2 \overline{) 5} 1 \\ 2 \overline{) 2} 0 \\ 2 \overline{) 1} 1 \end{array}$$

$$\begin{array}{l} 0.875 \times 2 = 1.75 \quad 1 \\ 0.75 \times 2 = 1.5 \quad 1 \\ 0.5 \times 2 = 1 \quad 1 \\ 0 \times 2 = 0 \quad 0 \end{array}$$

$$\begin{array}{r} 16 \overline{) 188} 12 \\ 16 \overline{) 11} 11 \end{array}$$

$$0.875 \times 16 = 14 \quad 14$$

$$\begin{array}{l} 0 \\ 0 \\ 0 \end{array}$$

1.12 (1) +17 $(17)_D = (10001)_B$ 用 8 位二进制补码表示为 00010001

1.3) -13 $(13)_D = (1101)_B$ 原码为 10001101 补码为 11110010