

Binary ~~Practice~~ Arithmetic

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① $01_2 = 1_{10}$

② $11011_2 = 27_{10}$
 $16 + 8 + 2 + 1 = 27$

③ $1110111 = 118_{20}$
 $\begin{matrix} 64 & 32 & 16 & 8 & 4 & 2 & 1 \\ 1 & 1 & 1 & 0 & 1 & 1 & 1 \end{matrix}$
 $= 118$

(4) $\begin{array}{ccccccc} & 16 & 8 & 4 & 2 & 1 \\ & 1 & 0 & 0 & 0 & 1 \\ \hline & 16 & + & 1 & = & 17 \end{array} \quad {}_2 = 17_{10}$

⑤ Mg age in binary is 10010

⑥ $25_{10} = 11001_2$

$$\begin{array}{r} 16 \\ -16 \\ \hline 9 \\ -8 \\ \hline 1 \\ -1 \\ \hline 0 \end{array}$$

$$\textcircled{7} \quad \begin{array}{r} 16_2 = 10000 \\ -16 \\ \hline 0 \end{array}$$

$1024 \quad 256 \quad 64 \quad 16 \quad 4$
 $1 \quad 1 \quad 1 \quad 1 \quad 1 \quad 1 \quad 1 \quad 1 \quad 1$
 $512 \quad 128 \quad 32 \quad 8 \quad 2 \quad 1$
 $(8) \quad 256_{10} = 100000000_2$
 $\begin{array}{r} 256 \\ -256 \\ \hline 0 \end{array}$

⑨ $161_{10} = 10110101_2$

$\begin{array}{r} 161 \\ -128 \\ \hline 33 \\ -32 \\ \hline 1 \\ -1 \\ \hline 0 \end{array}$

(10) $83_{10} = 1010011_2$

$$\begin{array}{r} 83 \\ -64 \\ \hline 19 \\ -16 \\ \hline 3 \\ -2 \\ \hline 1 \\ -1 \\ \hline 0 \end{array}$$