

Exercise binary - decimal

(A)

① $12020_3 = 2 \cdot 3^4 + 2 \cdot 3^3 + 1 \cdot 3^2 = \checkmark$
 $= 6 \cdot 81 + 54 + 9 = 141_{10}$

ht

② $1614_{10} = 4464_7$

$1614 : 7 = 230 \text{ r. } 4$

$230 : 7 = 32 \text{ r. } 6$

$32 : 7 = 4 \text{ r. } 4$

$4 : 7 = 0 \text{ r. } 4$

st

③ $123_4 + 212_4 = 1001_4$

$\begin{array}{r} 123_4 \\ 212_4 \\ \hline \end{array}$

$\begin{array}{r} \checkmark 11\checkmark \\ 1001\checkmark \end{array}$

st

(B)

① $2031_4 = 1 \cdot 4^3 + 3 \cdot 4^2 + 2 \cdot 4^1 = 1 + 12 + 8 = 21_{10}$

ht

② $956_{10} = (12471)_5$

$956 : 5 = 191 \text{ r. } 1$

$191 : 5 = 38 \text{ r. } 1$

$38 : 5 = 7 \text{ r. } 3$

$7 : 5 = 1 \text{ r. } 2$

$1 : 5 = 0 \text{ r. } 1$

st

③ $516_7 + 406_7 = 1225_7$

$\begin{array}{r} 516_7 \\ 406_7 \\ \hline \end{array}$

$\begin{array}{r} \checkmark 1\checkmark \\ 1225 \end{array}$

st

④ $\begin{array}{r} 11101 \\ 101 \\ \hline \end{array}$

$\begin{array}{r} 11101 \\ 00000\checkmark \\ 11101\checkmark \\ \hline \end{array}$

$\begin{array}{r} 10010001 \end{array}$

ht

④ $\begin{array}{r} 11011_2 \\ 110_2 \\ \hline \end{array}$

$\begin{array}{r} 00000 \\ 11011\checkmark \\ 11011\checkmark \\ \hline \end{array}$

$\begin{array}{r} 10100010 \end{array}$

ht

L=50 C=100 D=500 M=1000

(A)

(5) A) $2754 = \text{MMDCCXCIV}$ 21

B) $896 = \text{DCCCXCVI}$ 21

(6) A) $\text{MMMDLXIX} = 3569$ 21

B) $\text{MCDI} = 1401$ 21

Prüfung

$(302)_6$

$(31)_6$

302_6

1310_6

$(13402)_6$

B: 36

(B)

(5) A) $1543 = \text{MCMLIII}$ 21

B) $318 = \text{CCCLXVIII}$ 21

(6) A) $\text{MMMDLXVI} = 2566$ 21

B) $\text{CDLV} = 455$ 21

Prüfung

$(405)_5$

$(21)_5$

405_5

1320_5

$(14140)_5$

410_5

21_5

410_5

1320_5

$(14110)_5$

B: 36

$246 - 20(1)$

$245 - 18(2)$

$180 - 12(3)$

$125 - 9(4)$