

2.3.1

①  $24_{10}$

$$\begin{array}{r} 3 \\ 8 \overline{) 24} \\ \underline{24} \\ 0 \rightarrow 0 \end{array}$$

$$\begin{array}{r} 0 \\ 8 \sqrt{3} \\ \underline{0} \\ 3 \end{array}$$

$= 30_8$

②  $49_{10}$

$$\begin{array}{r} 6 \\ 8 \overline{) 49} \\ \underline{48} \\ 1 \rightarrow 1 \end{array}$$

$$\begin{array}{r} 0 \\ 8 \sqrt{6} \\ \underline{0} \\ 6 \end{array}$$

$= 61_8$

③  $180_{10}$

$$\begin{array}{r} 22 \\ 8 \overline{) 180} \\ \underline{176} \\ 4 \rightarrow \end{array}$$

$$\begin{array}{r} 2 \\ 8 \overline{) 22} \\ \underline{16} \\ 6 \end{array}$$

$$\begin{array}{r} 0 \\ 8 \sqrt{2} \\ \underline{0} \\ 2 \end{array}$$

$264_{10}$

④  $401_{10}$

$$\begin{array}{r} 50 \\ 8 \overline{) 401} \\ \underline{400} \\ 1 \rightarrow 1 \end{array}$$

$$\begin{array}{r} 6 \\ 8 \sqrt{50} \\ \underline{48} \\ 2 \rightarrow 2 \end{array}$$

$$\begin{array}{r} 0 \\ 8 \sqrt{6} \\ \underline{0} \\ 6 \end{array}$$

$621_{10}$

⑤  $2679_{10}$

$$\begin{array}{r} 334 \\ 8 \overline{) 2679} \\ \underline{2672} \\ 7 \end{array}$$

$$\begin{array}{r} 41 \\ 8 \overline{) 334} \\ \underline{328} \\ 6 \end{array}$$

$$\begin{array}{r} 5 \\ 8 \overline{) 41} \\ \underline{40} \\ 1 \end{array}$$

$$\begin{array}{r} 0 \\ 8 \sqrt{5} \\ \underline{0} \\ 5 \end{array}$$

$5167_8$

⑥  $76_{10} = 7 \times 16^1 + 6 \times 16^0 = 62$

⑦  $45_{10} = 4 \times 16^1 + 5 \times 16^0 = 37$

⑧  $137_{10} = 1 \times 16^2 + 3 \times 16^1 + 7 \times 16^0 = 95$

⑨  $366_{10} = 3 \times 16^2 + 6 \times 16^1 + 6 \times 16^0 = 246$

⑩  $1735_{10} = 1 \times 16^3 + 7 \times 16^2 + 3 \times 16^1 + 5 \times 16^0 = 989$



(11)

$19_{(10)}$

$$\begin{array}{r} 1 \\ 16 \overline{) 19} \\ \underline{16} \\ 3 \end{array}$$

$$\begin{array}{r} 0 \\ 16 \overline{) 19} \\ \underline{16} \\ 3 \end{array}$$

$13_{(16)}$

(12)

$63_{(10)}$

$$\begin{array}{r} 3 \\ 16 \overline{) 63} \\ \underline{48} \\ 15 \end{array}$$

$$\begin{array}{r} 0 \\ 16 \overline{) 63} \\ \underline{48} \\ 15 \end{array}$$

$= 3F$

(13)

$110_{(10)}$

$$\begin{array}{r} 6 \\ 16 \overline{) 110} \\ \underline{96} \\ 14 \end{array}$$

$$\begin{array}{r} 6 \\ 16 \overline{) 110} \\ \underline{96} \\ 14 \end{array}$$

$6E_{16}$

(14)

$422$

$$\begin{array}{r} 26 \\ 16 \overline{) 422} \\ \underline{416} \\ 6 \end{array}$$

$$\begin{array}{r} 1 \\ 16 \overline{) 26} \\ \underline{16} \\ 10 \end{array}$$

$$\begin{array}{r} 0 \\ 16 \overline{) 1} \\ \underline{1} \end{array}$$

$1A6$

(15)

$1205$

$$\begin{array}{r} 75 \\ 16 \overline{) 1205} \\ \underline{1200} \\ 5 \end{array}$$

$$\begin{array}{r} 75 \\ 16 \overline{) 1205} \\ \underline{1200} \\ 5 \end{array}$$

$$\begin{array}{r} 0 \\ 16 \overline{) 5} \\ \underline{4} \\ 1 \end{array}$$

$4B5$

(16)

$3C$

$16^3$

$16^2$

$16^1$

$16^0$

$3$

$12$

$=$

$60$

(17)

$B9$

$11$

$9$

$=$

$185$

(18)

$159$

$1$

$5$

$9$

$=$

$345$

(19)

$3A2$

$3$

$A$

$2$

$=$

$930$

(20)

$1903$

$1$

$01$

$C$

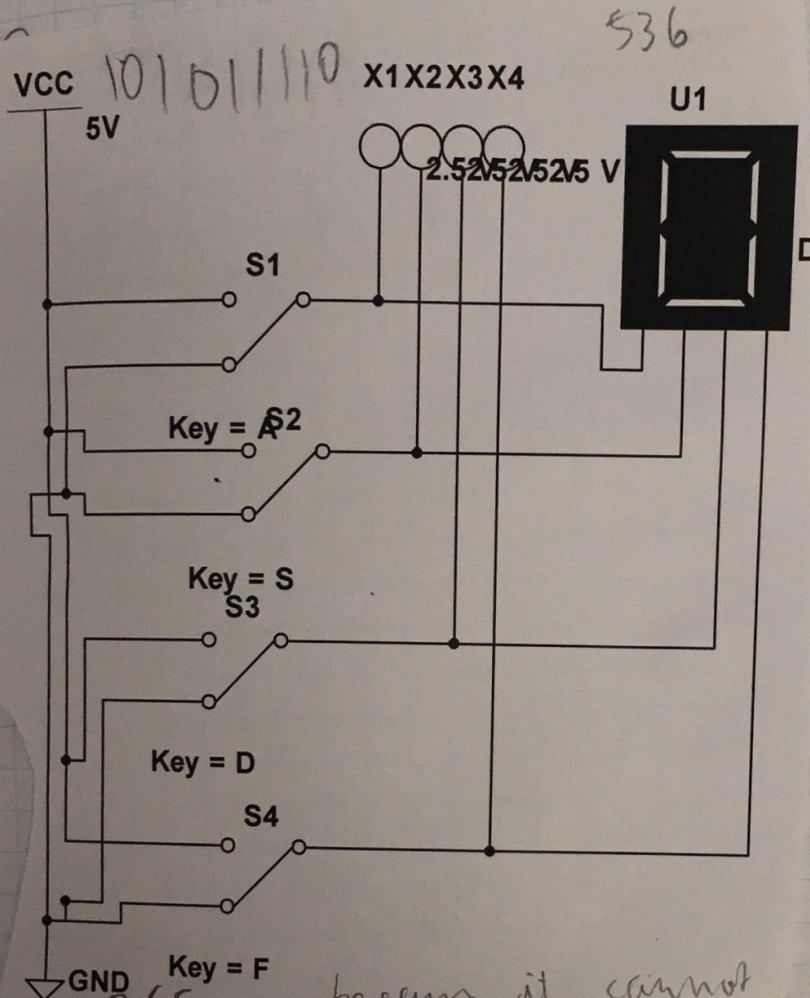
$3$

$=$

$6545$



①	101011	Oct 53	Hex 2B
②	110100011	643	1A3
③	11010110	626	D6
④	00101111	137	5F



0000	= 0
0001	1
0010	2
0011	3
0100	4
0101	5
0110	6
0111	7
1000	8
1001	9
1010	A
1011	B
1100	C
1101	D
1110	E
1111	F

1) 365 because it cannot contain 8 or more and it cannot be less than base 10 numbers

2) BADBEEF

488M      32<sup>3</sup>      32<sup>2</sup>      32<sup>1</sup>      32<sup>0</sup>      M      =      15 6950