

a) $1111_{10} \mid 8$

$$\begin{array}{r}
 31 \\
 71 \\
 \hline
 7
 \end{array}
 \begin{array}{r}
 138 \mid 8 \\
 58 \mid 7 \mid 8 \\
 \hline
 2 \quad 1 \quad 2 \mid 8 \\
 \hline
 2 \quad 0
 \end{array}$$

$$\begin{aligned}
 0.0101 \times 8 &= 0.0808 \rightarrow \Delta_1 = 0 & 0.9568 \times 8 &= 7.6544 \rightarrow \Delta_6 = 7 \\
 0.0808 \times 8 &= 0.6464 \rightarrow \Delta_2 = 0 & 0.6544 \times 8 &= 5.2352 \rightarrow \Delta_7 = 5 \\
 0.6464 \times 8 &= 5.1712 \rightarrow \Delta_3 = 5 & 0.2352 \times 8 &= 1.8816 \rightarrow \Delta_8 = 1 \\
 0.1712 \times 8 &= 1.3696 \rightarrow \Delta_4 = 1 & 0.8816 \times 8 &= 7.0528 \rightarrow \Delta_9 = 7 \\
 0.3696 \times 8 &= 2.9568 \rightarrow \Delta_5 = 2 & 0.0528 \times 8 &= 0.4224 \rightarrow \Delta_{10} = 0
 \end{aligned}$$

$$= (2127.0051275170\ldots)_8$$

$$= (10001010111.000001010010111\ldots)_2$$

b) $(1k11200k001k21220.001111021p22)_3 =$
 $= (175061856.043726\ldots)_9$

c) $5504577_9 \mid 5$

$$\begin{array}{r}
 045 \\
 27 \\
 \hline
 31
 \end{array}
 \begin{array}{r}
 100 \mid 5 \\
 40 \\
 \hline
 17
 \end{array}
 \begin{array}{r}
 746 \mid 5 \\
 43 \\
 \hline
 030
 \end{array}
 \begin{array}{r}
 163307 \mid 5 \\
 47 \\
 \hline
 4
 \end{array}
 \begin{array}{r}
 270471 \mid 5 \\
 30 \\
 \hline
 44
 \end{array}
 \begin{array}{r}
 4473 \mid 5 \\
 17 \\
 \hline
 03
 \end{array}
 \begin{array}{r}
 730 \mid 5 \\
 23 \\
 \hline
 03
 \end{array}
 \begin{array}{r}
 136 \mid 5 \\
 40 \\
 \hline
 2
 \end{array}
 \begin{array}{r}
 16 \mid 5 \\
 4 \\
 \hline
 3
 \end{array}
 \begin{array}{r}
 225 \mid 5 \\
 3 \\
 \hline
 0
 \end{array}$$

$$= (334230431)_5$$

d) $(706541.0347)_8 = 11111000011010110001.00001110111)_2$
 $= (1F0D61.0E7)₁₆ = (13300311201.003213)₄$

e) $(CDC4E.8DB)₁₆ = (3031301032.203123)₄ =$
 $= 11001101110101001110.100011011011)_2 =$
 $= (3156116.4333)_8$

(3) ~~QTF~~

a)
$$\begin{array}{r}
 11111111 \\
 FFCD9EB.B947_{16} \\
 + EAFEB1C.BBF8 \\
 \hline
 1EACC508.7541_{16}
 \end{array}$$

c)
$$\begin{array}{r}
 1010104.071_{16} \\
 = EFC5AD.9ABE_{16} \\
 \hline
 (113B56.6C52)_{16}
 \end{array}$$

d)
$$\begin{array}{r}
 1000101001.1001_2 \\
 - 111011011.1011_2 \\
 \hline
 (001001101.1101)_2
 \end{array}$$

(2)

b)
$$\begin{array}{r}
 7001022.0201_8 \\
 - 6763757.76744_8 \\
 \hline
 (01504203044)_8
 \end{array}$$

d)
$$\begin{array}{r}
 1011001010101010101 \\
 1100101111.1011_2 \\
 110110110.1011_2 \\
 + 1100101011.10011_2 \\
 \hline
 100000010010000001_2
 \end{array}$$