

Solution for Tutorial Set 2

1.

$$\begin{array}{ccc} (124)_{10} & \longleftrightarrow & (111\ 1100)_2 \\ & & (174)_8 \\ & & (7c)_{16} \end{array} \qquad \begin{array}{ccc} -(f3)_{16} & \longleftrightarrow & 1(111\ 0011)_2 \\ & & -(163)_8 \\ & & -(243)_{10} \end{array}$$

$$\begin{array}{ccc} (7.46)_{10} & \longleftrightarrow & (111.011101011\dots)_2 \\ & & (7.353)_8 \\ & & (7.758)_{16} \end{array} \qquad \begin{array}{ccc} (4f.6d)_{16} & \longleftrightarrow & (0100\ 1111.01101101)_2 \\ & & (117.332)_8 \\ & & (79.42578125)_{10} \end{array}$$

$(124)_{10}$ as a two's complement in HEX with 4bytes (=32 bits) per number is

$$(ffffff84)_{16}$$

$-(f3)_{16}$ as a two's complement in HEX with 4bytes (=32 bits) per number is

$$(7fffff0d)_{16}$$

$(7.46)_{10}$ in IEEE single precision HEX is

$$(40eeb000)_{16}$$

$(4f.6d)_{16}$ in IEEE single precision HEX is

$$(429eda00)_{16}$$

2.

	2's complement	IEEE
dd1d0000	5.853020×10^8	7.070651×10^{17}
efef0000	16842753	