

API - 2016/1º

② a) $(\overbrace{1001010111.011}^9 \overbrace{10}^6 \overbrace{1}^4)_2 = 512 + 64 + 16 + 7 + 0.25 + 0.125 = (599, 375)_{10} = (257.6)_{16}$

b) $(\overbrace{12202022201210212.01221022021}^9)_3 = (182281725.183823)_9$

c) $(660457)_8 = (?)_6 = (4425223)_6$

$$\begin{array}{r} 660457_8 \\ \times 045 \\ \hline 317 & 30 & 006 & 02 & 0010 & 2001 & 4021 & 2521 & 3416 & 4 \\ \hline 17 & 30 & 006 & 02 & 0010 & 2001 & 4021 & 2521 & 3416 & 4 \\ \hline 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 \\ \hline 660457_8 \end{array}$$

d) $(7576045.1457)_8 =$

$$\begin{aligned} &= (\overbrace{11110111110000100101.001100101111}^9)_2 \\ &= (13233300211.030233)_4 = (1EFC25.32F)_{16} \end{aligned}$$

e) $(DA94E, 8CB)_{16} = (3122211032.203023)_4$

$$\begin{aligned} &= (\overbrace{11011010100101001110.100011001011}^9)_2 \\ &= (3324516.4313)_8 \end{aligned}$$

$$\begin{array}{r}
 \textcircled{3a}) \quad \begin{array}{c} \text{1} & \text{1} \\ \text{F} & \text{D} & \text{E} & \text{D} & \text{B} & \text{E} & \text{C} & \text{.} & \text{B} & \text{D} & \text{E} & \text{7} \end{array}_{16} \\
 + \quad \begin{array}{c} \text{E} & \text{F} & \text{D} & \text{D} & \text{B} & \text{3} & \text{C} & \text{.} & \text{D} & \text{B} & \text{E} & \text{A} \end{array}_{16} \\
 \hline
 \begin{array}{c} \text{1} & \text{E} & \text{D} & \text{C} & \text{B} & \text{7} & \text{2} & \text{9.99} & \text{D} & \text{1} \end{array}_{16}
 \end{array}$$

$$\begin{array}{r}
 \text{b) } 70000210.03019 \\
 - 67857187.764879 \\
 \hline
 (1032011.15412)9
 \end{array}$$

$$\begin{array}{r} \text{c) } 1010200.071 \quad 16 \\ - \quad \text{FEC5BD.9DBE} \quad 16 \\ \hline (23C42.6952)_{16} \end{array}$$

$$\begin{array}{r}
 \text{d) } \begin{array}{c} \text{10101010101011101.1011} \\ + \text{1110111001.11101} \\ + \text{1101111011.10111} \\ \hline \text{(101100010011.01010)}_2 \end{array}
 \end{array}$$

$$\begin{array}{r}
 \text{e) } 1010001001.0001_2 \\
 - 111011101.1011_2 \\
 \hline
 (1010101101011)_2
 \end{array}$$