

GRUNTO-API - 2016/2º

(3E7.02D...)₁₆

512	— 9
256	— 8
128	— 7
64	— 6
32	— 5
16	— 4
8	— 3
4	— 2
2	— 1
1	— 0

2 a) (999.011)₁₀ = (11111100111.000100101101...)₂

0.011 × 2 = 0.022 → Δ-1 = 0	0.704 × 2 = 1.408 → Δ-7 = 1
0.022 × 2 = 0.044 → Δ-2 = 0	0.408 × 2 = 0.816 → Δ-8 = 0
0.044 × 2 = 0.088 → Δ-3 = 0	0.816 × 2 = 1.632 → Δ-9 = 1
0.088 × 2 = 0.176 → Δ-4 = 0	0.632 × 2 = 1.264 → Δ-10 = 1
0.176 × 2 = 0.352 → Δ-5 = 0	0.264 × 2 = 0.528 → Δ-11 = 0
0.352 × 2 = 0.704 → Δ-6 = 0	0.528 × 2 = 1.056 → Δ-12 = 1

b) (12212020201611211.11200022001)₃ = (185221154.460803)₉

c) 666666₈ = (4452130)₆

Diagram showing base 8 to base 6 conversion using intermediate base 3:

```

      6 6 6 6 6 6
      |  |  |  |  |  |
      1 1 1 1 1 1
      |  |  |  |  |  |
      3 1 1 1 1 1
      |  |  |  |  |  |
      1 4 1 4 1 4
      |  |  |  |  |  |
      2 0 2 0 2 0
      |  |  |  |  |  |
      2 5 5 5 5 5
      |  |  |  |  |  |
      3 5 3 4 3 4
      |  |  |  |  |  |
      5 4 4 4 4 4
      |  |  |  |  |  |
      4 0
  
```

d) (7770041.04561)₈ = (1FF021.12E2)₁₆ = (13333000201.01023202)₂

e) (EF90D.8CA)₁₆ = (3233210031.203022)₄ = (11101111100100001101.1000110010101010)₂ = (3574415.4312)₈

$$\begin{array}{r} \textcircled{3} \text{ a) } FEEDAEC.1D97_{16} \\ + EFCDBAC.DEFA_{16} \\ \hline (1EEB8698.FC81)_{16} \end{array}$$

$$\begin{array}{r} \text{b) } 70001110.0201_9 \\ - 68857347.75477_9 \\ \hline (00032651.15422)_9 \end{array}$$

$$\begin{array}{r} \text{c) } 1000100.021_{16} \\ - FDESBA.9DCE_{16} \\ \hline (21B45.6442)_{16} \end{array}$$

$$\begin{array}{r} \text{d) } \begin{array}{l} 101101011011010101011 \\ 1101111001.1111_2 \\ 1110101011.10101_2 \\ 1101101111.01111_2 \end{array} \\ + \\ \hline (101010010101.00010)_2 \end{array}$$

$$\begin{array}{r} \text{e) } \begin{array}{l} 1001011001.0001_2 \\ 111011101.1111_2 \end{array} \\ - \\ \hline (01111011.00011)_2 \end{array}$$