

$$\textcircled{1} (11001001)_{\text{Gray}} \xrightarrow{+04} 141 \Rightarrow (11000000)_{\text{Gray}} \xrightarrow{+14} 144 \Rightarrow (11001001)_{\text{Gray}}$$

+4

$$\Rightarrow (11001001)_{\text{Gray}} = (\text{10001100})_2$$

0 0000
1 0001
2 0011
3 0010
4 0110
5 0111
6 0101
7 0100

$$\textcircled{2} (11001001)_2 = (4011)_{10} = (?)_{\text{Gray}}$$

8 1100
9 1101
10 1111
11 1110
12 1010
13 1011
14 1001
15 1000

$$\begin{array}{r} +04 \quad 144 \\ \hline 10000000 \quad 00000000 \end{array}$$

+4

$$\begin{array}{r} +14 \\ \hline 144 \\ -144 \\ \hline 0 \end{array} \Rightarrow 10000000 \rightarrow 144$$

$$144 + 9 \Rightarrow (110101101)_{\text{Gray}}$$

+7

$$\textcircled{3} (1444404, 1444414)_{14} = (?)_{14}$$

$$\Rightarrow (11)_{14} = (00100 \quad 111 \quad 011 \quad 100 \quad 000 \quad 110 \quad 001 \quad 010 \quad 010 \quad 011 \quad 100)_{14}$$

$$\Rightarrow (1444404, 1444414)_{14}$$

9) 011110001001

-8

0	1	1	1	1	0	0	0	1	0	0	1
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P_1 P_2 d_1 P_3 d_2 d_3 d_4 P_4 d_5 d_6 d_7 d_8

$P_1 \Rightarrow$ 1 \Rightarrow شماره ای ضمیمه \Rightarrow 0, 1, 1, 0, 1, 0, 1 $\xrightarrow{\text{فر}}$ \times باید باشد P_1 (1, 3, 5, 7, 9, 11)

$P_2 \Rightarrow$ 1 \Rightarrow دو به یکی شماره و دو به یکی \Rightarrow 1, 1, 0, 0, 0, 0, 0 $\xrightarrow{\text{فر}}$ \times باید باشد P_2 (2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12)

$P_3 \Rightarrow$ 1 \Rightarrow 1, 1, 0, 0, 0, 1 $\xrightarrow{\text{فر}}$ \checkmark (4, 5, 6, 7, 12)

$P_4 \Rightarrow$ 1 \Rightarrow 1, 9, 10, 11, 12 \Rightarrow 0, 1, 0, 0, 0, 1 $\xrightarrow{\text{فر}}$ \checkmark (1, 9, 10, 11, 12)

میگردد P_1 و $P_2 \Rightarrow 12 = 3 \xrightarrow{\text{بیش از 3 است}}$ \Rightarrow 01001001 (مطلوب)