

CRC

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9) 101001111 / 10111

$$\begin{array}{r}
 \overline{) 101001111} \\
 \underline{10111} \\
 00011111 \\
 \underline{10111} \\
 010001 \\
 \underline{10111} \\
 \underline{00110}
 \end{array}$$

checksum:-

9) 0x3456 0xABCC 0x02BC 0xEEBB

0x3456 = 0011 0100 0101 0110
 0xABCC = 1010 1011 1100 1100
 0x02BC = 0000 0010 1011 1100
 0xEEBB = 1110 1110 1011 1011

$$\begin{array}{r}
 0011 \ 0100 \ 0101 \ 0110 \\
 (+) \ 1010 \ 1011 \ 1100 \ 1100 \\
 \hline
 1110 \ 0000 \ 0010 \ 0010
 \end{array}$$

$$\begin{array}{r}
 1110 \ 0000 \ 0010 \ 0010 \\
 (+) \ 0000 \ 0010 \ 1011 \ 1100 \\
 \hline
 1110 \ 0010 \ 1101 \ 1110
 \end{array}$$

$$\begin{array}{r}
 \begin{array}{cccc}
 1110 & 0010 & 1101 & 1110 \\
 (+) 1010 & 1110 & 1011 & 1011 \\
 \hline
 1101 & 0001 & 1001 & 1001 \\
 (+) & & & 1 \\
 \hline
 1101 & 0001 & 1001 & 1010 \\
 0010 & 1110 & 0110 & 0101 \\
 \hline
 1111 & 1111 & 1111 & 1111
 \end{array}
 \end{array}$$

$$9) 130.34.12.64 / 26$$

$$\begin{array}{l}
 \text{IP addr} \Rightarrow 1000010 \cdot 00100010 \cdot 00001100 \cdot 01000000 \\
 \text{subnet} \quad 11111111 \cdot 11111111 \cdot 11111111 \cdot \underline{11}
 \end{array}$$

(do And operation)

$$\text{network} \quad 1000010 \cdot 00100010 \cdot 00001100 \cdot \underline{01000000}$$

$$\text{Network} = 130.34.12.64 / 26$$

$$\text{For Broadcast} = \text{Take } \begin{array}{l} 01000000 \\ \underline{01111111} \end{array}$$

$$= 130.34.12.127$$

$$\text{For 1st address} = \text{Take } \begin{array}{l} 01000000 \\ 01000001 \end{array}$$

$$= 130.34.12.65$$

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for last address = Take 0010000000
1101 1101 01111100 (H)
1001 1001 1001 1001
= 130.34.12.126 (H)

01011011 1000 1011
10100110 0111 0100
11111111 1111

130.34.12.126

00000101 00100100 01000001 01000001
11111111 11111111 11111111 11111111