1:32:29

B. 8-bit 2's complement → decimal

1. $(0001\,1110)_{8\text{ bit }2\text{'s comp}}$

$= (1\cdot 2^1) + (1\cdot 4) + (1\cdot 8) + (1\cdot 16)$

$2 + 4 + 8 + 16 \rightarrow 30$

$\boxed{(30)_{10}}$

2. $(1110\,0110)_{8\text{ bit }2\text{'s comp}}$

$= (0\cdot 2^0) + (1\cdot 2^1) + (1\cdot 4) + (1\cdot 32) + (1\cdot 64) + ((-1)\cdot 2^7)$

$2 + 4 + 32 + 64 - 128$

$102 - 128$

$\begin{array}{r} 128 \\ -\ 102 \\ \hline 026 \end{array}$

$\boxed{(-26)_{10}}$

3. $(00101101)_{8\text{ bit }2\text{'s comp}} = (2^0\cdot 1) + (0\cdot 2) + (1\cdot 4) + (1\cdot 8) + (1\cdot 32)$

$1 + 4 + 8 + 32$

$\boxed{(45)_{10}}$

4. $(10011110)_{8\text{ bit }2\text{'s comp}} = (0\cdot 2^0) + (1\cdot 2^1) + (1\cdot 4) + (1\cdot 8) + (1\cdot 16) + ((-1)\cdot 2^7)$

$2 + 4 + 8 + 16 - 128$

$30 - 128$

$\begin{array}{r} 0128 \\ -\ 30 \\ \hline 098 \end{array}$

$\boxed{(-98)_{10}}$