

Convert 110101 from Binary to Decimal

$$110101_2 = 85_{10}$$

| | | | | | | |
|-----|----|----|---|---|---|---|
| | 1 | 1 | 0 | 1 | 0 | 1 |
| 128 | 64 | 16 | 8 | 4 | 2 | 1 |

$$64 + 16 + 0 + 4 + 0 + 1 = 85$$

Convert 98 from Decimal to Binary

98

| | | | | | | |
|----------------|---------------|---------------|--------------|--------------|--------------|--------------|
| 0 | 1 | 1 | 1 | 1 | | |
| 128 | 64 | 16 | 8 | 4 | 2 | 1 |

| | | | | | | | |
|-------|-------|-------|-------|-------|-------|-------|-------|
| 0 | 1 | 1 | 0 | 0 | 0 | 1 | 0 |
| 128 | 64 | 32 | 16 | 8 | 4 | 2 | 1 |
| 2^7 | 2^6 | 2^5 | 2^4 | 2^3 | 2^2 | 2^1 | 2^0 |

$$98_{10} = 01100010_2$$

$$\begin{array}{r} 98 \\ -64 \\ \hline 34 \\ -32 \\ \hline 2 \end{array}$$

$$\begin{array}{r} 98 \\ -64 \\ \hline 34 \\ -16 \\ \hline 18 \\ -8 \\ \hline 10 \\ -4 \\ \hline 6 \\ -2 \\ \hline 4 \end{array}$$