

## Understanding basic binary subtractions.

Convert the decimal numbers given below to binary, and then carry out the subtractions using the methods described at:

<http://www.learnabout-electronics.org/Digital/dig13.php>

Example

$^1$  = Borrow (worth  $10_2$ )

$^1$  = Payback (worth  $01_2$ )

$$\begin{array}{r} 12 \\ 9 - \\ \hline 3 \end{array}$$

$$\begin{array}{r} 11\ 10\ 10 \\ 10\ 01\ 1 \\ \hline 00\ 11 \end{array}$$

4 bit binary

$$\begin{array}{r} 15 \\ 9 - \\ \hline \end{array}$$

$$\begin{array}{r} 12 \\ 3 - \\ \hline \end{array}$$

8 bit binary

$$\begin{array}{r} 27 \\ 17 - \\ \hline \end{array}$$

$$\begin{array}{r} 56 \\ 31 - \\ \hline \end{array}$$