

0	0
1	0
0	1
1	1

with 2 bits we have $2^2 = 4$ possibilities

$$\begin{array}{rcl} 0 & & 0 \\ & & (2) \\ \hline 0. & & 0 \\ * & & * \\ 2^1 & + & 2^0 \\ 0 & + & 0 = 0 \end{array}$$

$$\begin{array}{rcl} 1 & & 0 \\ & & (2) \\ \hline 1 & & 0 \\ * & & * \\ 2^1 & + & 2^0 \\ \hline 2 & + & 0 = 2 \end{array}$$

$$\begin{array}{r} \begin{array}{cc} 0 & 1 \\ \hline 0 & 1 \\ * & * \\ 2^1 + & 2^0 \\ \hline 0 & + & 1 & = & 1 \end{array} \end{array} \quad (2)$$

$$\begin{array}{r} 1 \qquad 1 \\ \qquad (2) \\ \hline 1 \qquad 1 \\ * \qquad * \\ 2^1 + \quad 2^0 \\ \hline 2 \qquad + \quad 1 = 3 \end{array}$$

32-bit length

[illegible][illegible]