

$$\begin{array}{r} \text{TWO} \\ + \text{TWO} \\ \hline \text{FOUR} \end{array}$$

Variables :- $F, T, U, W, R, O, x_1, x_2, x_3$

Domains :- $(0, 1, 2, 3, 4, 5, 6, 7, 8, 9)$ (Same domain for all)

Sample constraints

all dif (F, T, U, W, R, O)

or a binary constraint for all eg. $F \neq T, F \neq U$

A unary constraint: $F \neq 0$

An n-ary constraint: $0 + 0 = R + 10 * x_1$

can add constraints to restrict the x_i 's to 0 or 1

$$\begin{array}{r} \text{TWO} \\ + \text{TWO} \\ \hline \text{FOUR} \end{array}$$

$$\begin{array}{r} 7 \ 6 \ 5 \\ 7 \ 6 \ 5 \\ \hline 1 \ 5 \ 3 \ 0 \end{array}$$