

Constraint Library

Some notes:

- Expressions and reified constraints can be used whenever variables are accepted
- “Var.” stands for “variable”, “Const.” for “constant”, “expr.” for “expression”
- “Reif.” stands for “reifiable” (“-” when reification is not needed)

Comparison

$x < y, x \leq y$	inequality	reif.	x, y vars. or const.
$x = y$	equality	reif.	x, y vars. or const.
$x \neq y$	disequality	reif.	x, y vars. or const.

Arithmetic

$[z =] x + y$	inequality (expr.)	-	x, y vars. or const.
$[z =] x y$	product (expr.)	-	x, y vars. or const.
$[z =] x $	abs. value (expr.)	-	x, y vars. or const.
$[z =] \min(x, y)$	minimum (expr.)	-	x, y vars. or const.

Logical

$[z =] \neq x$	not	-	x var. or const.
$[z =] x \wedge y$	and	-	x, y vars. or const.
$[z =] x \vee y$	or	-	x, y vars. or const.
$x \Rightarrow$	implication	-	x, y vars. or const.
$x \Leftrightarrow y$	equivalence	-	x, y vars. or const.
$x \oplus y$	equivalence	-	x, y vars. or const.

Globals

$[z =] \sum x$	summation	-	x vector of vars./const.
$[z =] \min(x)$	and	-	x vector of vars./const.
ALLDIFF(x)	all different	not reif.	x vector of vars.
GCC(x, v, l, u)	global card. cst.	not reif.	x vars., v, l, u const.
$[z =] v_x$	element (expr.)	not reif.	x var., v vars. or const.
TABLE(x, T)	table	not reif.	x vars., T table
CUMULATIVE(s, d, r, c)	cumulative	not reif.	x vars., c const. d, r vars. or const.
