5.270 multiple

DESCRIPTION LINKS

Origin Arithmetic.

Constraint multiple(X, Y, C)

Arguments

X	:	dvar
Y	:	dvar
C	:	int

Restrictions

$\mathtt{X} \neq 0$
$\mathtt{Y} \neq 0$
$\mathtt{C} > 0$

Purpose Enforce $\max(|\mathtt{X}|, |\mathtt{Y}|) = \mathtt{C} \cdot \min(|\mathtt{X}|, |\mathtt{Y}|)$, (with $|\mathtt{X}| \neq 0$ and $|\mathtt{Y}| \neq 0$).

Example $(8, -2, 4)$

The multiple constraint holds since $\max(|8|, |-2|) = 4 \cdot \min(|8|, |-2|)$.

Typical $\mathtt{C} > 1$

Arg. properties

Functional dependency: C determined by X and Y.

Keywords

constraint arguments: binary constraint.

constraint type: predefined constraint, arithmetic constraint.

modelling: functional dependency.