

5.391 `sum_powers6_ctr`

	DESCRIPTION	LINKS
Origin	Arithmetic constraint.	
Constraint	<code>sum_powers6_ctr(VARIABLES, CTR, VAR)</code>	
Synonyms	<code>sum_powers6</code> , <code>sum_of_powers6</code> , <code>sum_of_powers6_ctr</code> .	
Arguments	VARIABLES : <code>collection</code> (var–dvar) CTR : <code>atom</code> VAR : <code>dvar</code>	
Restrictions	<code>required</code> (VARIABLES, var) CTR ∈ [=, ≠, <, ≥, >, ≤]	
Purpose	Constraint the sum of the power of six of a set of domain variables. More precisely, let S denote the sum of the power of six of the variables of the VARIABLE collection (when the collection is empty the corresponding sum is equal to 0). Enforce the following constraint to hold: S CTR VAR.	
Example	<div style="border: 1px solid black; padding: 2px; display: inline-block;"> $((1, 1, 2), =, 66)$ </div> The <code>sum_powers6_ctr</code> constraint holds since the condition $1^6 + 1^6 + 2^6 = 66$ is satisfied.	
Typical	$ VARIABLES > 1$ <code>range</code> (VARIABLES.var) > 1 CTR ∈ [=, <, ≥, >, ≤]	
Symmetry	Items of VARIABLE are permutable .	
Arg. properties	<ul style="list-style-type: none"> • Contractible wrt. VARIABLE when CTR ∈ [<, ≤]. • Extensible wrt. VARIABLE when CTR ∈ [≥, >]. • Aggregate: VARIABLE(union), CTR(id), VAR(+). 	
See also	common keyword: <code>sum_ctr</code> , <code>sum_cubes_ctr</code> , <code>sum_powers4_ctr</code> , <code>sum_powers5_ctr</code> , <code>sum_squares_ctr</code> (<i>sum</i>).	
Keywords	characteristic of a constraint: <code>sum</code> . constraint type: predefined constraint, arithmetic constraint.	

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