

## 5.129 distance

	DESCRIPTION	LINKS
<b>Origin</b>	Arithmetic constraint.	
<b>Constraint</b>	<code>distance(X, Y, Z)</code>	
<b>Arguments</b>	X : <code>dvar</code> Y : <code>dvar</code> Z : <code>dvar</code>	
<b>Restriction</b>	$Z \geq 0$	
<b>Purpose</b>	Enforce the fact that Z is equal to $ X - Y $ .	
<b>Example</b>	<code>(5, 7, 2)</code>	
	The <code>distance</code> constraint holds since $2 =  5 - 7 $ .	
<b>Typical</b>	$Z > 0$	
<b>Symmetry</b>	Arguments are <code>permutable</code> w.r.t. permutation (X, Y) (Z).	
<b>Arg. properties</b>	<b>Functional dependency:</b> Z determined by X and Y.	
<b>Systems</b>	<code>distanceEQ</code> in <b>Choco</b> , <code>distance</code> in <b>JaCoP</b> , <code>distance2</code> in <b>JaCoP</b> .	
<b>See also</b>	<b>implies:</b> <code>leq_cst</code> . <b>related:</b> <code>all_min_dist</code> (fixed minimum distance between all pairs of variables of a collection of variables), <code>smooth</code> .	
<b>Keywords</b>	<b>constraint arguments:</b> ternary constraint, pure functional dependency. <b>constraint type:</b> arithmetic constraint, predefined constraint. <b>modelling:</b> functional dependency.	

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