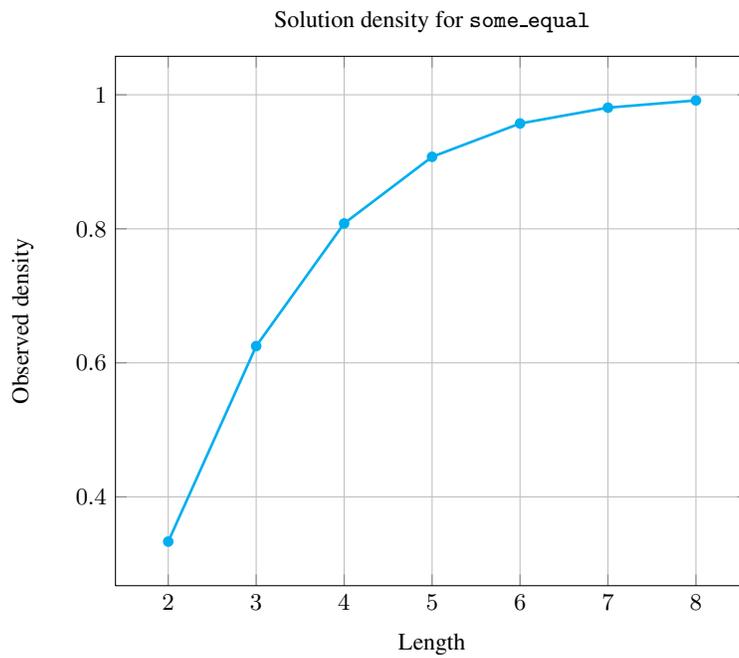
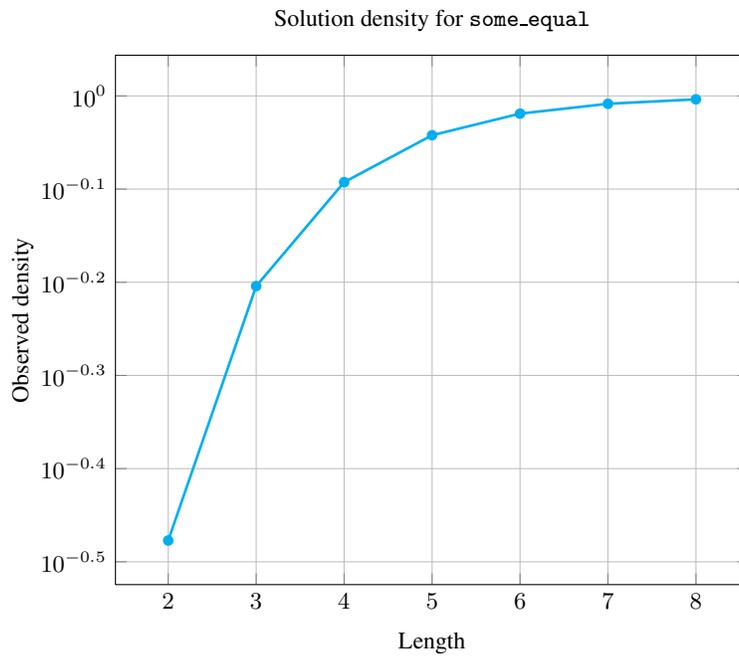


5.370 `some_equal`

	DESCRIPTION	LINKS	GRAPH
Origin	Derived from <code>alldifferent</code>		
Constraint	<code>some_equal(VARIABLES)</code>		
Synonyms	<code>some_eq</code> , <code>not_alldifferent</code> , <code>not_alldiff</code> , <code>not_alldistinct</code> , <code>not_distinct</code> .		
Argument	<code>VARIABLES</code> : <code>collection(var-dvar)</code>		
Restrictions	<code>required(VARIABLES, var)</code> <code> VARIABLES > 1</code>		
Purpose	Enforce at least two variables of the collection <code>VARIABLES</code> to be assigned the same value.		
Example	<code>((1, 4, 1, 6))</code> The <code>some_equal</code> constraint holds since the first and the third variables are both assigned the same value 1.		
Typical	<code> VARIABLES > 2</code> <code>nval(VARIABLES.var) > 2</code>		
Symmetries	<ul style="list-style-type: none"> Items of <code>VARIABLES</code> are <code>permutable</code>. All occurrences of two distinct values of <code>VARIABLES.var</code> can be <code>swapped</code>; all occurrences of a value of <code>VARIABLES.var</code> can be <code>renamed</code> to any unused value. 		
Arg. properties	<code>Extensible</code> wrt. <code>VARIABLES</code> .		
Counting			

Length (n)	2	3	4	5	6	7	8
Solutions	3	40	505	7056	112609	2056832	42683841

Number of solutions for `some_equal`: domains $0..n$



Used in [soft_alldifferent_var.](#)

See also [negation: alldifferent.](#)

Keywords

characteristic of a constraint: sort based reformulation.

constraint type: value constraint.

Arc input(s)	VARIABLES
Arc generator	<code>CLIQUE(<) ↦ collection(variables1, variables2)</code>
Arc arity	2
Arc constraint(s)	<code>variables1.var = variables2.var</code>
Graph property(ies)	<code>NARC > 0</code>

Graph model

We generate a *clique* with an equality constraint between each pair of distinct vertices and state that the number of arcs of the final graph should be strictly greater than 0.

Parts (A) and (B) of Figure 5.714 respectively show the initial and final graph associated with the **Example** slot. The `some_equal` constraint holds since the final graph has at one arc, i.e. two variables are assigned the same value.

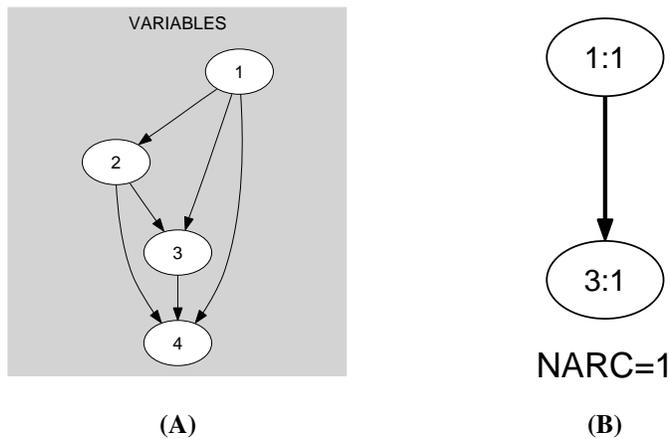


Figure 5.714: Initial and final graph of the `some_equal` constraint