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MODULE *appex4\_13*

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EXTENDS *Naturals*

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VARIABLES  $x, y, pc$

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Define actions from the text of annotated algorithm

$al1l2 \triangleq$

$\wedge pc = \text{"l1"}$   
 $\wedge pc' = \text{"l2"}$   
 $\wedge x' = 2 * y$   
 $\wedge y' = y$

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Define the computation relation

$next \triangleq al1l2 \vee \text{UNCHANGED } \langle x, y, pc \rangle$

Define the initial conditions

$init \triangleq pc = \text{"l1"} \wedge x = 1 \wedge y = 12$

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Define the invariant from the annotation

$i \triangleq$

$\wedge pc = \text{"l2"} \Rightarrow x = 1 \wedge y = 24$   
 $\wedge pc = \text{"l1"} \Rightarrow x = 1 \wedge y = 12$

Define the safety property to check namely the partial correctness

$Init \triangleq init$

$Next \triangleq next$

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\ \* Modification History  
 \ \* Last modified *Fri Oct 02 09:35:17 CEST 2020* by *mery*  
 \ \* Created *Wed Sep 09 17:02:47 CEST 2015* by *mery*