MODULE *appex2_4*

$5 * labyrinthe *$)EXTENDS *Integers*, *TLC*
VARIABLES p
CONSTANTS *input*, *output*

$n \triangleq 10$
$nodes \triangleq 1 \,..\, n$
$l \triangleq [i \in 1 \,..\, n \mapsto$ IF $i = 1$ THEN $\{4, 5\}$ ELSE
IF $i = 2$ THEN $\{6, 7, 10\}$ ELSE
IF $i = 4$ THEN $\{7, 8\}$ ELSE
IF $i = 5$ THEN $\{\}$ ELSE
IF $i = 6$ THEN $\{4\}$ ELSE
IF $i = 7$ THEN $\{5\}$ ELSE
IF $i = 8$ THEN $\{5, 2\}$ ELSE
$\{\}$
$]$

$lab \triangleq [\langle x, y\rangle \in (nodes \times nodes) \mapsto$
IF $x = 1 \land y = 1$ THEN $\{\langle 1, 2\rangle\}$ ELSE
IF $x = 1 \land y = 2$ THEN $\{\langle 1, 1\rangle, \langle 1, 3\rangle, \langle 2, 2\rangle\}$ ELSE
IF $x = 1 \land y = 3$ THEN $\{\langle 1, 2\rangle\}$ ELSE
IF $x = 2 \land y = 2$ THEN $\{\langle 1, 2\rangle\}$
ELSE $\{\}$

$]$

$Init \triangleq p = 1$
$M(i) \triangleq \land i \in l[p]$
$\land p' = i$
$Next \triangleq \exists\, i \in 1 \,..\, n : M(i)$

$Initlab \triangleq p = input$
$ML(q) \triangleq \land q \in lab[p]$
$\land p' = q$
$Nextlab \triangleq \exists\, q \in nodes \times nodes : ML(q)$

$Sortie \triangleq p \notin output$