--------------- MODULE $appex3\_4$ ---------------

EXTENDS $Naturals,\ TLC,\ Integers$

VARIABLES $v,\ pc$

$L\ \triangleq\ \{\ \text{"l0"},\ \text{"l1"}\ \}$

$Init\ \triangleq\ v = 3 \wedge pc = \text{"l0"}$

$al0l1\ \triangleq$
$\qquad \wedge pc = \text{"l0"}$
$\qquad \wedge pc' = \text{"l1"}$
$\qquad \wedge v' = v + 2$

$i\ \triangleq$
$\qquad \wedge v \in Int$
$\qquad \wedge pc \in L$
$\qquad \wedge pc = \text{"l0"} \Rightarrow v = 3$
$\qquad \wedge pc = \text{"l1"} \Rightarrow v = 5$

$Next\ \triangleq\ al0l1 \vee (v' = v \wedge pc' = pc)$

$Safety\ \triangleq\ pc = \text{"l1"} \Rightarrow v = 5$