

MODULE <i>appex3_5</i>
EXTENDS <i>Naturals, TLC, Integers</i> VARIABLES v, pc $L \triangleq \{ \text{"l0"}, \text{"l1"} \}$
$Init \triangleq v = 3 \wedge pc = \text{"l0"}$
$al0l1 \triangleq$ $\quad \wedge pc = \text{"l0"}$ $\quad \wedge pc' = \text{"l1"}$ $\quad \wedge v' = v + 2$
$i \triangleq$ $\quad \wedge v \in Int$ $\quad \wedge pc \in L$ $\quad \wedge pc = \text{"l0"} \Rightarrow v = 3$ $\quad \wedge pc = \text{"l1"} \Rightarrow v = 5$
$Next \triangleq al0l1 \vee (v' = v \wedge pc' = pc)$ $PartialCorrectness \triangleq pc = \text{"l1"} \Rightarrow v = 5$ $Prop1 \triangleq Init \Rightarrow i$ $Prop2 \triangleq i \Rightarrow PartialCorrectness$