

```

1 MACHINE M
2 VARIABLES  $x, y$ 
3 INVARIANTS
4   inv1:  $x \in \mathbb{Z}$ 
5   inv2:  $y \in \mathbb{N}$ 
6   inv3:  $x + y > 0$ 
7   thm1:  $x \geq -y$  theorem
8 EVENTS
9   INITIALISATION
10  THEN
11    act1:  $x := 0$ 
12    act2:  $y := y' > 1$ 
13  END
14
15  Progress ordinary
16  WHERE
17    grd1:  $y \geq 0$ 
18  THEN
19    act1:  $x := x + 1$ 
20    act2:  $y := y - 1$ 
21  END
22 END

```