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|----- MODULE apex1_1 -----|
| modules de base importables |
| EXTENDS Naturals, Integers, TLC |
|-----|
| CONSTANTS max, maxint, mminint |
| minint  $\triangleq$   $- mminint$  |
|-----|
| VARIABLES np |
|-----|
| tentative 1 |
| entrer  $\triangleq$  |
|    $\wedge$  TRUE |
|    $\wedge np' = np + 1$  |
| sortir  $\triangleq$   $np' = np - 1$  |
| next1  $\triangleq$   $entrer \vee sortir$  |
| Init  $\triangleq$   $np = 0$  |
|-----|
| tentative 2 |
| entrer2  $\triangleq$   $np < max \wedge np' = np + 1$  |
| next2  $\triangleq$   $entrer2 \vee sortir$  |
|-----|
| tentative 3 |
| sortir2  $\triangleq$   $np > 0 \wedge np' = np - 1$  |
| next3  $\triangleq$   $entrer2 \vee sortir2$  |
|-----|
| Safety1  $\triangleq$   $np \in Int$  |
| Safety2  $\triangleq$   $np \leq max$  |
| Safety3  $\triangleq$   $np \geq 0$  |
| qq  $\triangleq$   $np \neq 6$  |
| rte  $\triangleq$   $minint \leq np \wedge np \leq maxint$  |
| Safety  $\triangleq$   $Safety1 \wedge Safety2 \wedge Safety3$  |
| Lesclous  $\triangleq$   $np \in minint .. maxint$  |
|-----|

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