

model check

[/Reference manual](#)/[Z-related commands](#)/[Decision procedure commands](#)

The *model check* command decides predicates by exhaustively considering all possible combinations of values for its local declarations. It is applicable to universal and existential quantification predicates in which all variables are constrained to finite integer ranges using `..` or to enumerated free types by reference to the type or to set extensions of integers or enumerated elements. The constraints on those variables must involve only first-order logical connectives (\Leftrightarrow , \Rightarrow , \wedge , \vee , \forall , \neg), the predicates *true* and *false*, the ordering relations ($<$, \leq , $=$, \geq , $>$, \neq), the arithmetic functions ($+$, $-$, $*$, *div*, *mod*), number literals, and variables bound by the quantifiers.

The *model check* command works by interfacing the Z predicate to the freely available SMV model checking tool.

All the numeric functions and relations used must have been declared in the [prelude](#), or in sections called [numdefs](#) or *numkit* or *toolkit*.

1. Tactic example

“model check” p_1 p_2

This example applies the *model check* command to predicates p_1 and p_2 .



IT 1-Oct-1999

Page 1 of 2



Go Back

Full Screen

Close

Quit