Checklist for Designing or Reading a Model

The MiniZinc
Language

Modelling

Set Variables
&Constraints

**Modelling
Checklist**

1. Use `enum` instead of $\alpha..\beta$ for index ranges when fitting

2. Beware of decision variables without tight domains

3. No explicit variables of type `opt` τ are used (in M4CO)

4. The index ranges of all arrays start from `1`, for clarity

5. No `sum|forall(i in 1..x)` with a var. `x` is used

6. Beware of `where` θ and `if` θ with θ having variables

7. Beware of explicit (`<->`) & implicit (`(...)`) reification

8. Beware of negation and disjunction: `not`, `\/`, `exists`, `xor`, `xorall`, `if` θ `then` ϕ `else` ψ `endif`, `<-`, `->`, `<->`

9. Beware of arbitrarily nested logical quantifications, such as `forall(...exists(...forall(...)))`

10. Beware of nonlinear, `pow`, `div`, `/`, `mod` constraints

Checklist for Designing or Reading a Model

11 Predicates with the most specific semantics are used

12 Global constraints are not replaced by their definitions

13 Constraints over shared variables are ideally merged

14 The `element` predicate is not used explicitly, for clarity

15 Functions are encoded if needed by implicit `element`

16 Relations are encoded if needed by `regular` / `table`