**calendar\_SMT\_DeepSeek-V3 (94% correct within 5 iterations of evaluation)**

|  |  |
| --- | --- |
| **Number of Iterations** | **Count** |
| 1 | 85 |
| 2 | 7 |
| 3 | 2 |
| 4 | 1 |
| 5 | 5 |
| **Grand Total** | **100** |

Error analysis:

pass 1:

9 errors (syntax), 5 wrong plan (semantics), 1 no plan (semantics)

pass 2:

3 errors (syntax), 4 wrong plan (semantics), 1 no plan (semantics)

pass 3:

2 errors (syntax), 3 wrong plan (semantics), 1 no plan (semantics)

pass 4:

1 errors (syntax), 3 wrong plan (semantics), 1 no plan (semantics)

pass 5:

1 errors (syntax), 2 wrong plan (semantics), 1 no plan (semantics)

Semantic:

Logical errors related to constraint translation and AND/OR in 2 examples

Ex 985: logical errors (AND / OR) leading to no plan, iteration without feedback doesn’t help.

Ex 227: logical error, time conversion, not identified and not corrected after 5 passes

Syntactic:

Parenthesis error happened in 3 examples.

Ex 724: Execution error: SyntaxError: '(' was never closed

Common error, specific line number not included in feedback so could take more than 1 round to identify the issue. Pass 1,2 and 3 code the same. Took 3 passes to correct it.

Ex 938: Execution error: unsupported operand type(s) for //: 'ArithRef' and 'int'

Common error, typing difference between python and z3

start\_hour = 9 + start\_time // 60

At this point in the function, start\_time is still a **Z3 symbolic integer** (Int('start\_time')). This line is trying to do arithmetic on it as if it were a normal Python integer, but it's not — it's symbolic, and Z3 doesn't overload // for symbolic + concrete in this way.

Corrected after 1 pass.