

# testgen/runs-2014-07-27\_\_04\_03\_21

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results from testgen/runs-2014-07-27\_\_04\_03\_21

## 1 Validate Solution

- size attributes on relations (1406448497.essence), sets (1406448497.essence).
- inner most set not converted to matrix in solution translation.

Listing 1.1: 1406468690.essence

```
Expected: matrix indexed by [int, int] of relation (set of int)
Found:    matrix indexed by [int, int] of relation (matrix indexed by [int] of
          int)
```

## 2 Inconsistent

- Only 1 of out of the 3 eprimes are satisfiable, when they should all be.

Listing 1.2: 1406438642.essence

```
language Essence 1.3
find var0:
  relation of
    (relation (size 1) of (int(3..5) * int(4..4)) *
     matrix indexed by [int(3..5)] of int(5..5) * function int(2..5) -->
     int(5..5))
```

- 5 eprimes, 4 are satisfiable, one is not, when they should all be satisfiable

Listing 1.3: 1406470083.essence

```
language Essence 1.3
find var0:
  function (surjective, minSize 4)
    set of int(2..3) --> matrix indexed by [int(5..5)] of int(5..5)
```

- 2 eprimes, only 1 satisfiable when they both should be satisfiable.

Listing 1.4: 1406470239.essence

```
language Essence 1.3
find var0: set (size 3) of function int(2..3) --> int(4..4)
```

### 3 Solution Translation

- partition from matrix, partition from set (1406434592.essence)
- function set -> function -> int (1406435421.essence)
- relation of function -> function -> relation (1406449575.essence)

### 4 Misc

- If one of the eprimes timed out, it should not be used in the inconstant calculations (1406448933.essence).
- Always allow solution translation and solution validation? solution translation is basically instant. solution validation can take a while if there are lots of constraints. Same reason as above.

### 5 Missing Representation Rule

1406324659

```
No representation rule matches domain: find var2:
                                     function (maxSize 3, minSize 2) int
                                     (2..2) --> int(1..3)
```

1406333150

```
No representation rule matches domain: find var0: partition (minNumParts 1) from
int(4..4)
```

1406333151

```
No representation rule matches domain: find var0:
                                     partition (maxPartSize 4) from int
                                     (4..4)
```

1406333170

```
No representation rule matches domain: find var1:
                                     partition (partSize 1) from
                                     function (total) int(3..3) -->
                                     int(4..5)
```

1406333198

```
No representation rule matches domain: find var0:
                                     function (injective, maxSize 2,
                                     surjective, total, minSize 3)
                                     set (minSize 4) of int(3..5)
                                     --> set (maxSize 5) of int
                                     (5..5)
```

1406333220

```
No representation rule matches domain: function (total, minSize 1, injective,
size 3)
```

`int(3..4) --> int(2..4)`

No representation rule matches domain: find var1:

partition (regular) from  
relation (minSize 4) of  
(matrix indexed by [int(3..5)] of partition (minNumParts 4,  
partSize 1,  
minPartSize 5) from  
int(5..5))

1406332163

No representation rule matches domain: find var2:

function (maxSize 3, minSize 2) int  
(2..2) --> int(1..3)