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)
```