Rules

4. IF (year mod100: 0 mod400: {≠0})
    THEN REMOVE 1
        ADD (hasDays days: 365)

5. IF (year mod400: 0)
    THEN REMOVE 1
        ADD (hasDays days: 366)

WM [(hasDays days: 365)

All conditions are disjoint, so one rule fires at a time.

Example 6 — compute the greatest common factor of two integers.

if $a > b$ then $gcf(a,b) = gcf(a-b, b)$
    else $gcf(a,b) = gcf(a, b-a)$
$gcf(0, a) = gcf(a, 0) = a$

WM [(gcf val1: 6   val2: 9)

Rules

1. IF (gcf val1: 0 val2: 0)
    THEN REMOVE 1
        ADD (res val: 0)

2. IF (gcf val1: 0 val2: {≠0})
  (gcf val2: x)
    THEN REMOVE 1
        ADD (res val: x)

3. similar to 2, for val1: {≠0} and val2: 0

4. IF (gcf val1: {≠0} val2: {≠0})
  (gcf val1: a val2: b)
  (gcf val1: {>b})
    THEN MODIFY 2 (val1 [a-b])

5. similar to 4, for $a \leq b$.

WM [(res val: 3).

All conditions are disjoint, one rule fires at a time.