

```

open import Data.Nat

data MensPref : Set where
  woman :  $\mathbb{N} \rightarrow$  MensPref
  node  : MensPref  $\rightarrow$  MensPref  $\rightarrow$  MensPref
  man   :  $\mathbb{N} \rightarrow$  MensPref  $\rightarrow$  MensPref  $\rightarrow$  MensPref

-- [(1, [2,1]), (2, [1,2])]
ex : MensPref
ex =
  node
    (man 1
      (woman 2)
      (woman 1))
    (man 2
      (woman 1)
      (woman 2))

-- [(1, [2,3,1]), (2, [1,2,3]), (3, [2,1,3])]
ex' : MensPref
ex' =
  node
    (man 1
      (woman 2)
      (man 1
        (woman 3)
        (woman 1)))
    (node
      (man 2
        (woman 1)
        (man 2
          (woman 2)
          (woman 3)))
      (man 3
        (woman 2)
        (man 3
          (woman 1)
          (woman 3))))

-- Next tasks: write conversion from [([])] to MensPref
-- Write the step function

```