

5. Nr. de subliste care are un nr. par de nivele.

Modelare matematică:

$$\text{nivele}(e, \text{niv}) = \begin{cases} \text{niv}, & e \text{ atom} \\ \max_{i=1}^n \text{nivele}(e_i, \text{niv}+1), & \text{altfel} \end{cases}$$

↑
se poate reface ori funcția predefinită ①
ori funcție proprie ②

$$\textcircled{2} \text{ maxim}(e_1 \dots e_n, m) = \begin{cases} (m), & n=0 \\ \text{maxim}(e_2 \dots e_n, e_1), & e_1 \text{ e nr. \> } m \\ \text{maxim}(e_2 \dots e_n, m), & \text{altfel} \end{cases}$$

$$\text{subliste}(e) = \begin{cases} 0, & e \text{ atom} \\ 1 + \sum_{i=1}^{\text{nivele}(e,0)} \text{subliste}(e_i), & \text{nivele}(e,0) \text{ e nr. par} \\ \sum_{i=1}^{\text{nivele}(e,0)} \text{subliste}(e_i), & \text{altfel} \end{cases}$$

①

(defun nivele (e niv)

(cond

((atom e) niv)

((+ (apply #'max (mapcar #'(lambda (y)

(nivele y (+ niv 1))

)

)

)

(defun subliste (e)

(cond

((atom e) 0)

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((evenp (nivele e 0)) (+ (apply #'+ (mapcar #'sueliste
(+ (apply #'+ (mapcar #'sueliste e) ) )
)
)
)

```

②

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(defun maxim (e1 m)
  (cond
    ((null e1) (e1st m))
    ((and (numberp (car e1)) (> (car e1) m))
      (maxim (cdr e1) (car e1) ) )
    (+ (maxim (cdr e1) m) )
  )
)

```

```

(defun nivele (e1 niv)
  (cond
    ((atom e1) (e1st niv) )
    (+ (maxim (mapcar #'(lambda (y)
      (nivele y (+ niv 1) )
    ) e1
    0 ) )
  )
)

```

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(defun sueliste (e1)
  (cond
    ((atom e1) 0 )
    ((evenp (car (nivele e1 0))) (+ 1 (apply #'+

```

(mapcar #'suggestions))))

(+ (appex #'(mapcar #'suggestions)))

))