

1. Chain Multiply

- (a) Arguments: left matrix chain (A) and right matrix chain (B)
- (b) Results: Result matrix

- $\forall i \in R.row$
 - $\forall j \in R.col$
 - * $R_{i,j} = CM(A[i], B[j])$
 - * —- Note that CM is the chain multiply procedure.

2. Chain Multiply Element

- (a) Arguments: row link (r) and column link (c)
- (b) Output: Double result: total

- $rlimit = r.size;$
- $climit = c.size;$
- $k = l = 0;$
- $jlow = 0;$
- $total = 0.0$
- $BnotExhausted = true$
- while both ($k \leq rlimit$) and (BnotExhausted)
 - $\forall l \in [jlow, climit)$ if ($A_i^c.getKey(k) \equiv B_j^c.getKey(l)$) then $lmatch = 1$
 - if ($l \equiv climit$) $BnotExhausted = false$
 - otherwise
 - * $temp += A_i^c[k] * B_j^c[lmatch]$
 - * $jlow = lmatch$