

Algorithm Theory - Assignment 4

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Problem 1

- a) We compute the m-table and the s-table according to the MATRIX-CHAIN-ORDER procedure, with a slight modification. Rather than replacing a value if the computational cost is lower, we replace it when the cost is higher. By doing this, we find the product order which maximizes the number of scalar multiplications.

Table 1: m-table

0	15750	18000	21000	43875
	0	2625	6000	17625
		0	750	4500
			0	1250
				0

Table 2: s-table

	0	1	1	0
		1	1	1
			2	3
				3