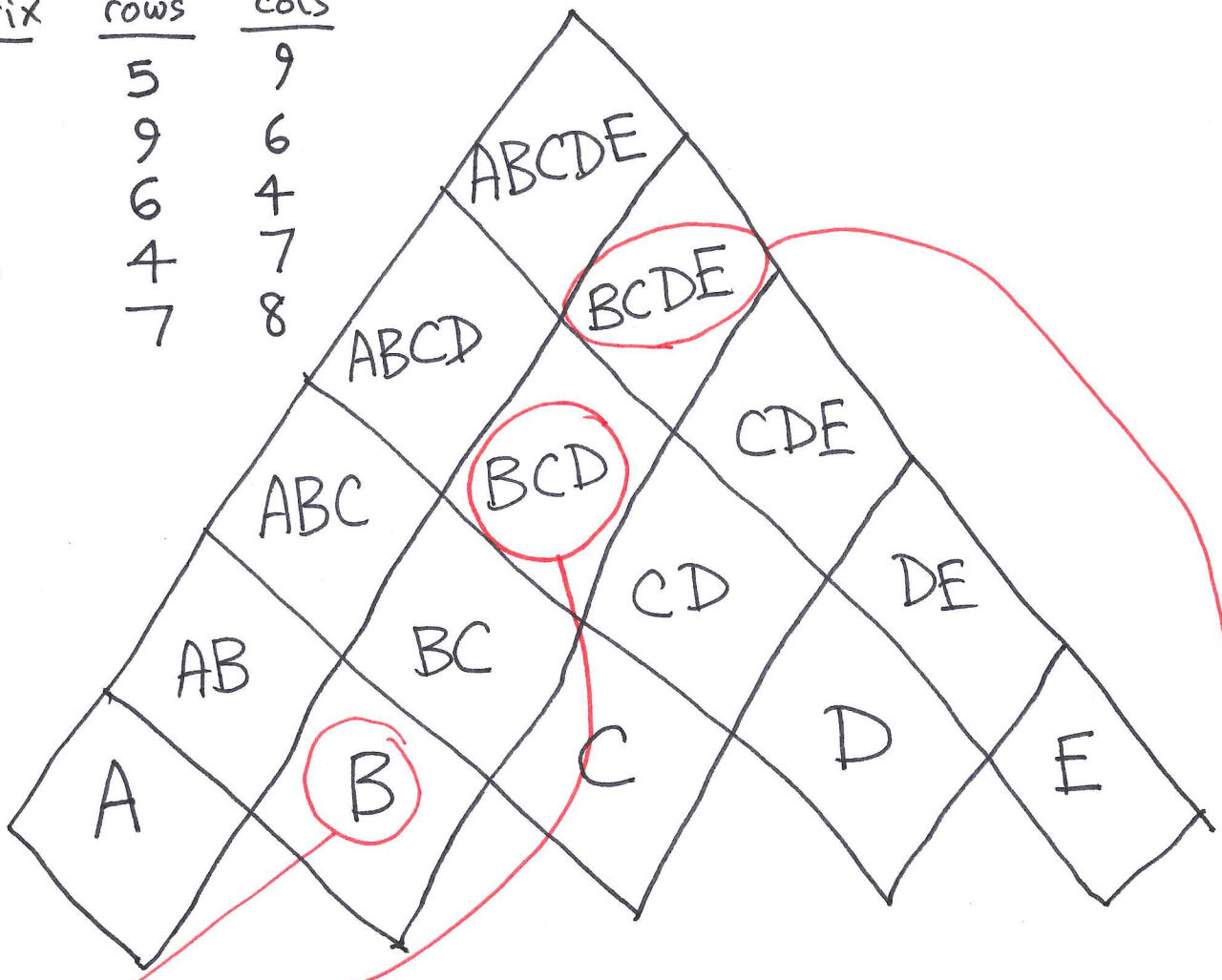
matrix	size rows	cols
A	5	9
B	9	6
C	6	4
D	4	7
E	7	8



This square BCD contains the minimum number of operations required to produce the matrix B×C×D

~~whether~~ This one contains the same for BCDE, mincost(BCDE)

BCDE can be calculated as B×(CDE)
or (BC)×(DE)
or (BCD)×E

mincost(B) = 0 because it is given as an input.

so

mincost(BCDE) = the smallest out of

{ mincost(B) + mincost(CDE) + cost of multiplying B (9×6) by CDE (6×8)

  | from table + | from table + 9×6×8

or

{ mincost(BC) + mincost(DE) + cost of multiplying BC (9×4) by DE (4×8)

  | from table + | from table + 9×4×8

or

{ mincost(BCD) + mincost(E) + cost of multiplying BCD (9×7) by E (7×8)

  | from table + | from table + 9×7×8

How can the table be implemented?

Quick way – a 5 row 5 column array

but you can think of something better

say A is matrix 0, B is matrix 1, ..., E is matrix 4

Array[r][c] contains mincost(Matrix r × ..... × matrix c)

when r ≤ c

so mincost(BCDE) (1 2 3 4) is stored at Array[1][4]

mincost(CD) (2 3) is stored at Array[2][3]

etc