④ M - sym. poly $M = M^T$

M, N sym. (lemat $(MN)^T = N^T M^T$)

a) $M + N = M^T + N^T = (M+N)^T$ ✓

b) $\Rightarrow MN = (MN)^T = N^T M^T = NM$

$\Leftarrow MN \neq NM$

c) $MN + NM = M^T N^T + N^T M^T =$

$= (NM)^T + (MN)^T = (NM + MN)^T$