



# Strassen's algorithm

1. **Divide:** Partition  $A$  and  $B$  into  $(n/2) \times (n/2)$  submatrices. Form terms to be multiplied using  $+$  and  $-$ .
2. **Conquer:** Perform 7 multiplications of  $(n/2) \times (n/2)$  submatrices recursively.
3. **Combine:** Form  $C$  using  $+$  and  $-$  on  $(n/2) \times (n/2)$  submatrices.

$$T(n) = 7 T(n/2) + \Theta(n^2)$$