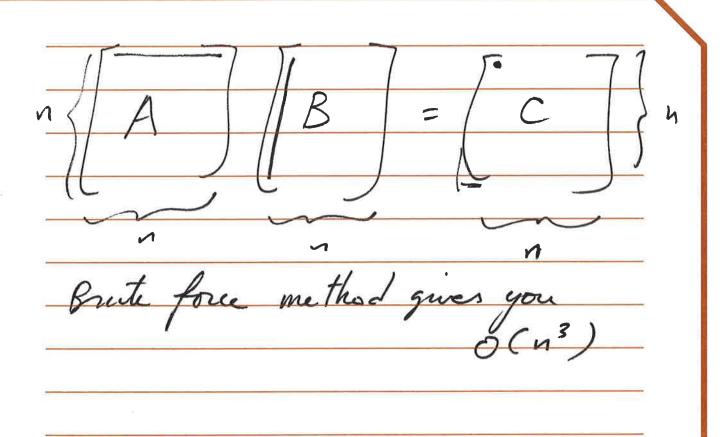
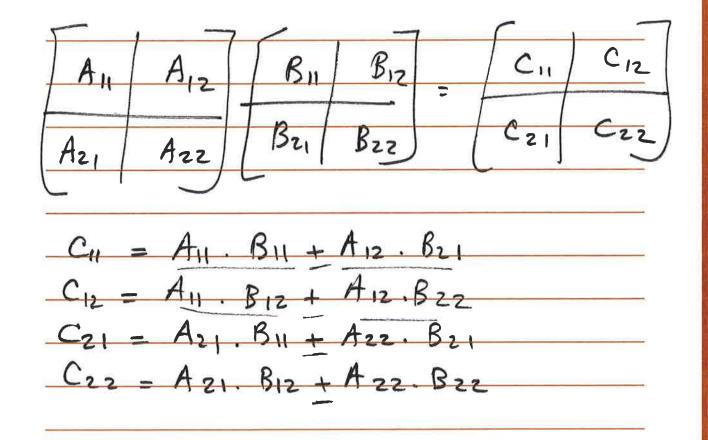
Divide l'Congrer
Dense Matrix Multiplication
- Hense / la / rix / well pucation





$$D(n) = O(n)$$

$$C(n) = O(n^2)$$

$$a = 8$$

$$b = 2$$

$$f(n) = O(n^2)$$

$$\log_9 \log_8 3$$

$$r = r = r$$

$$Case 1 \Rightarrow O(n^3)$$

Strassen's Alg.

$$P = (A_{11} + A_{22})(B_{11} + B_{22})$$

$$Q = (A_{21} + A_{22})B_{11}$$

$$R = A_{11}(B_{12} - B_{22})$$

$$S = A_{22}(B_{21} - B_{11})$$

$$T = (A_{11} + A_{12})B_{22}$$

$$U = (A_{21} - A_{11})(B_{11} + B_{12})$$

$$V = (A_{12} - A_{22})(B_{21} + B_{22})$$

$$C_{11} = P + S_{2} - T + V$$

$$C_{12} = R + T$$

$$C_{21} = Q + S$$

$$C_{22} = P + R - Q + V$$

$$a = 7$$
 $b = 2$ $b =$

$$\Rightarrow \Theta(n^{2.81})$$