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### Matrix Multiplication

$$\begin{bmatrix} 5 & 4 & 3 & 2 \\ 9 & 7 & 6 & 5 \\ 3 & 9 & 12 & 15 \\ 22 & 18 & 16 & 10 \end{bmatrix}$$

$$\begin{bmatrix} 18 & 56 & 13 & 12 \\ 7 & 6 & 5 & 4 \\ 33 & 91 & 25 & 44 \\ 21 & 19 & 2 & 1 \end{bmatrix}$$

$$\begin{aligned} & 5 \times 18 + 4 \times 7 + 3 \times 33 + 2 \times 21 \\ & 5 \times 56 + 4 \times 6 + 3 \times 91 + 2 \times 19 \\ & 5 \times 13 + 4 \times 5 + 3 \times 25 + 2 \times 2 \\ & 5 \times 12 + 4 \times 4 + 3 \times 44 + 2 \times 1 \end{aligned}$$

$$\begin{aligned} & 9 \times 18 + 7 \times 7 + 6 \times 33 + 5 \times 21 \\ & 9 \times 56 + 7 \times 6 + 6 \times 91 + 5 \times 19 \\ & 9 \times 13 + 7 \times 5 + 6 \times 25 + 5 \times 2 \\ & 9 \times 12 + 7 \times 4 + 6 \times 44 + 5 \times 1 \end{aligned}$$

$$\begin{aligned} & 3 \times 18 + 9 \times 7 + 12 \times 33 + 15 \times 21 \\ & 3 \times 56 + 9 \times 6 + 12 \times 91 + 15 \times 19 \\ & 3 \times 13 + 9 \times 5 + 12 \times 25 + 15 \times 2 \\ & 3 \times 12 + 9 \times 4 + 12 \times 44 + 15 \times 1 \end{aligned}$$

$$\begin{aligned} & 22 \times 18 + 18 \times 7 + 16 \times 33 + 10 \times 21 \\ & 22 \times 56 + 18 \times 6 + 16 \times 91 + 10 \times 19 \\ & 22 \times 13 + 18 \times 5 + 16 \times 25 + 10 \times 2 \\ & 22 \times 12 + 18 \times 4 + 16 \times 44 + 10 \times 1 \end{aligned}$$