

Section 4.2: cont'd

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from last time, we were finding A^{-1} using the cofactor method for

$$A = \begin{bmatrix} 1 & 2 & 3 \\ 2 & 3 & 4 \\ 1 & 5 & 7 \end{bmatrix}$$

we ended with:

$$A^{-1} = \frac{1}{\det(A)} C^T$$

shortcut for calculating $\det(A)$:

$$\det(A) = 1 \begin{vmatrix} 3 & 4 \\ 5 & 7 \end{vmatrix} - 2 \begin{vmatrix} 2 & 4 \\ 1 & 7 \end{vmatrix} + 3 \begin{vmatrix} 2 & 3 \\ 1 & 5 \end{vmatrix}$$

C_{11} C_{12} C_{13}

↑
plus
the
negative sign

$$= 1(1) + 2(-10) + 3(7)$$
$$= 2$$

$$A^{-1} = \frac{1}{2} \begin{bmatrix} 1 & 1 & -1 \\ -10 & 4 & 2 \\ 7 & -3 & -1 \end{bmatrix}$$