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Inversion of Matrices

By M. P.

$$
\begin{array}{llll}
A = & 2+3+1+4 & * & a = 2+1+3-1 \\
& 1-2-1+3 & * & b = 3-2-1+1 \\
& 3-1+2+1 & * & c = 1-1+2-2 \\
& -1+1-2-1 & * & d = 4+3+1-1
\end{array}
$$

$$\alpha^{-b} = (1-1+0+1)/6$$

$$\gamma^{-c} = (1-7-6-23)/42$$

$$\gamma^{-d} = (5+7-9-10)/42$$

$$\gamma^{-a} = (0+0+1+1)/2$$

$$A^{-1} = \left| \begin{array}{l} 0+0+21+21 \\ 7-7+0+7 \\ 1-7-6-23 \\ 5+7-9-10 \end{array} \right| \Big/ 42$$

$$A \cdot A^{-1} = \left| \begin{array}{l} 1+0+0+0 \\ 0+1+0+0 \\ 0+0+1+0 \\ 0+0+0+1 \end{array} \right| = A^{-1} \cdot A$$

See page 96 in vol. 10
For the same solution

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$$A = \begin{matrix} 2+3+1+4 \\ 1-2-1+3 \\ 3-1+2+1 \\ -1+1-2-1 \end{matrix}$$

We write:

The determinant seems to be 2(42). = 84

$$\begin{aligned} a &= 2+1+3-1 \\ b &= 3-2-1+1 \\ c &= 1-1+2-2 \\ d &= 4+3+1-1 \end{aligned}$$

$$\gamma^{-b} = (1-1+0+1)/6$$

$$\gamma^{-c} = (1-7-6-23)/42$$

$$\gamma^{-d} = (5+7-9-10)/42$$

$$\gamma^{-a} = (0+0+1+1)/2$$

Final

$$A^{-1} = \left| \begin{matrix} (0+0+1+1)/2 \\ (1-1+0+1)/6 \\ (1-7-6-23)/42 \\ (5+7-9-10)/42 \end{matrix} \right| = \left| \begin{matrix} 0+0+21+21 \\ 7-7+0+7 \\ 1-7-6-23 \\ 5+7-9-10 \end{matrix} \right| \Big/ 42$$

not complete

$$A^{-1} \cdot A^{+A} = \left. \begin{matrix} 1+0+0+0 \\ 0+1+0+0 \\ 0+0+1+0 \\ 0+0+0+1 \end{matrix} \right| = A \cdot A^{-1}$$