8.09*

torsdag 29 februari 2024 20:49

$$D = S^{-1} A S \iff A = S D S^{-1}$$

$$S = \begin{pmatrix} 1 & 4 \\ 2 & 1 \end{pmatrix} \qquad S^{-1} = \frac{1}{7}\begin{pmatrix} -1 & 4 \\ 2 & -1 \end{pmatrix}$$

$$D = \begin{pmatrix} 2 & 0 \\ 0 & -3 \end{pmatrix}$$

$$A = \begin{pmatrix} 1 & 4 \\ 2 & 1 \end{pmatrix}\begin{pmatrix} 2 & 0 \\ 0 & -3 \end{pmatrix}\frac{1}{7}\begin{pmatrix} -1 & 4 \\ 2 & -1 \end{pmatrix} =$$

$$= \begin{pmatrix} 2 & -12 \\ 4 & -3 \end{pmatrix}\frac{1}{7}\begin{pmatrix} -1 & 4 \\ 2 & -1 \end{pmatrix} =$$

$$= \frac{1}{7}\begin{pmatrix} -26 & 20 \\ -10 & 19 \end{pmatrix}$$