

Matrix decomposition

$$A = \begin{pmatrix} 0.1 & 2 & 2 & 1.3 \\ 0.4 & 3 & 3 & 1 \\ 0.1 & 4 & 4.1 & 1.2 \end{pmatrix}$$

$$A.v_1 = \begin{pmatrix} 2.78 \\ 4.20 \\ 5.68 \end{pmatrix} \quad w_1.A = (0.3 \quad 5.3 \quad 5.4 \quad 1.9)$$

Matrix recomposition

$$A = \begin{pmatrix} 0.1 & 2 & 2 & 1.3 \\ 0.4 & 3 & 3 & 1 \\ 0.1 & 4 & 4.1 & 1.2 \end{pmatrix}$$

$$\begin{pmatrix} 2.78 \\ 4.20 \\ 5.68 \end{pmatrix} \cdot (0.3 \quad 5.3 \quad 5.4 \quad 1.9) = \begin{pmatrix} 0.12 & 2.07 & 2.10 & 0.7 \\ 0.18 & 3.13 & 3.18 & 1.10 \\ 0.25 & 4.24 & 4.30 & 1.49 \end{pmatrix} * 7.2$$