

$$\begin{array}{|c|c|} \hline & \begin{array}{c} x_2 \\ x_1 \end{array} \\ \hline \begin{array}{c} x_1 \\ x_1 \end{array} & \begin{array}{c} 2 \\ x_a \end{array} \\ \hline \begin{array}{c} x_1 \\ x_a \end{array} & \begin{array}{c} 2 \\ \lambda x_2 \end{array} \\ \hline \end{array} \oplus \begin{array}{|c|c|} \hline & \begin{array}{c} x_2 \\ x_1 \end{array} \\ \hline \begin{array}{c} x_1 \\ x_1 \end{array} & \begin{array}{c} 2 \\ x_a \end{array} \\ \hline \begin{array}{c} x_1 \\ x_a \end{array} & \begin{array}{c} 2 \\ \lambda x_2 \end{array} \\ \hline \end{array} \oplus \begin{array}{|c|c|} \hline & \begin{array}{c} x_2 \\ x_1 \end{array} \\ \hline \begin{array}{c} x_1 \\ x_1 \end{array} & \begin{array}{c} 2 \\ x_a \end{array} \\ \hline \begin{array}{c} x_1 \\ x_a \end{array} & \begin{array}{c} 2 \\ \lambda x_2 \end{array} \\ \hline \end{array}$$

The diagram illustrates the decomposition of a tensor product of two 2x2 matrices. The left-hand side shows the product of two matrices, each with a dashed diagonal line. The top-left matrix has diagonal elements 1 and μx_1 , and off-diagonal elements x_1 and x_a . The top-right matrix has diagonal elements 2 and λx_2 , and off-diagonal elements x_2 and x_1 . The right-hand side shows the direct sum of two 2x2 matrices. The first matrix is identical to the top-left matrix of the product. The second matrix is identical to the top-right matrix of the product. The direct sum is indicated by the \oplus symbol between the two matrices on the right.