

Work sheet 8

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C.2

$$\begin{bmatrix} 0 & b \\ a & 0 \end{bmatrix} * \begin{bmatrix} 0 & b \\ a & 0 \end{bmatrix} = \begin{bmatrix} ab & 0 \\ 0 & ab \end{bmatrix}$$

To end with the matrix

$$\begin{bmatrix} 1 & 0 \\ 0 & 1 \end{bmatrix}$$

we can see that:

$$ab = 1$$

C.3

$$\exists C \rightarrow \mathbf{A} * \mathbf{B} * \mathbf{C} = \mathbf{I}$$

$$\mathbf{A}^{-1} = \mathbf{B} * \mathbf{C}$$

$$\mathbf{A} * \mathbf{A}^{-1} = \mathbf{I}$$