Solution (#583) (i) Write A and B as linear combinations of $A + B$ and $A - B$.

(ii) For the second part we can use

$$A = \begin{pmatrix} 1 & 1 \\ 0 & 1 \end{pmatrix}; \qquad B = \begin{pmatrix} 1 & -1 \\ 0 & 1 \end{pmatrix}.$$