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$$AB = \begin{bmatrix} 1 & 1 \\ 1 & 2 \end{bmatrix} \begin{bmatrix} 2 & -1 \\ -1 & k \end{bmatrix} = \begin{bmatrix} 1 & -1+k \\ 0 & 2k-1 \end{bmatrix}$$

We must have $-1+k=0$ and $2k-1=1$. The solution to both equations is $k=1$.