6. $\mathbf{A} = \begin{pmatrix} x & 1 & 3 \\ 2 & 4 & x \\ -4 & -2 & -1 \end{pmatrix}$

(a) Show that **A** is non-singular for all real values of x.

(4)

(b) Determine, in terms of x, $\mathbf{A}^{-1}$

(4)

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Question 6 continued

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(Total for Question 6 is 8 marks)

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