1.

$$\mathbf{M} = \begin{pmatrix} 2k+1 & k \\ k+7 & k+4 \end{pmatrix} \text{ where } k \text{ is a constant}$$

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

(3)

(b) Determine $\mathbf{M}^{-1}$ in terms of k.

(2)

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Question 1 continued

(Total for Question 1 is 5 marks)