

15 (a)

$$\mathbf{A} = \begin{pmatrix} 3 & -1 \\ -4 & 2 \end{pmatrix} \quad \mathbf{B} = \begin{pmatrix} 2 & -\frac{1}{2} \\ 2 & -2 \end{pmatrix}$$

Calculate $3\mathbf{A} - 2\mathbf{B}$

$$\begin{pmatrix} & \\ & \end{pmatrix}$$

(2)

(b)

$$\mathbf{P} = \begin{pmatrix} 5 & -3 \\ -3 & 2 \end{pmatrix} \quad \mathbf{QP}^{-1} = \begin{pmatrix} 0 & 1 \\ -10 & -17 \end{pmatrix}$$

Find the matrix \mathbf{Q}

$$\begin{pmatrix} & \\ & \end{pmatrix}$$

(2)

(Total for Question 15 is 4 marks)

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