

**[2014(Matrices).P1Q25] Amendment to answer keys:**

Given:  $\mathbf{A} = \begin{pmatrix} 3 & -1 \\ 2 & 4 \end{pmatrix}$      $\mathbf{B} = \begin{pmatrix} 5 & 3 \\ 0 & -2 \end{pmatrix}$

(a)  $3\mathbf{A} - \mathbf{B} = 3 \begin{pmatrix} 3 & -1 \\ 2 & 4 \end{pmatrix} - \begin{pmatrix} 5 & 3 \\ 0 & -2 \end{pmatrix} = \begin{pmatrix} 9-5 & -3-3 \\ 6-0 & 12+2 \end{pmatrix} = \begin{pmatrix} 4 & -6 \\ 6 & 14 \end{pmatrix}$  (ans)

(b)  $\mathbf{A}^2 = \begin{pmatrix} 3 & -1 \\ 2 & 4 \end{pmatrix} \begin{pmatrix} 3 & -1 \\ 2 & 4 \end{pmatrix} = \begin{pmatrix} 9-2 & -3-4 \\ 6+8 & -2+16 \end{pmatrix} = \begin{pmatrix} 7 & -7 \\ 14 & 14 \end{pmatrix}$  (ans)

(c) ...