$$3A + 4B - 2C = \begin{pmatrix} 3 \times 2 & -5 \times 3 & 3 \times 1 \\ 0 & 3 \times (-1) & 3 \times 5 \end{pmatrix}$$

$$+ \begin{pmatrix} 4 \times 1 & 4 \times (-2) & 4 \times (-3) \\ 4 \times 3 & 4 \times 0 & 4 \times (-4) \end{pmatrix}$$

$$- \begin{pmatrix} 2 \times 0 & 2 \times 1 & 2 \times (-2) \\ 2 \times 1 & 2 \times (-1) & 2 \times (-1) \end{pmatrix}$$

$$= \begin{pmatrix} 6+4-0 & -15-8+2 & 3-12-4 \\ 0+6-2 & -3+0-2 & 15-16-2 \end{pmatrix}$$

$$= \begin{pmatrix} 10 & -21 & -13 \\ 4 & -5 & -3 \end{pmatrix}$$