A The inverse of $\begin{pmatrix} 9 & 2 \\ 4 & 1 \end{pmatrix}$ is $\begin{pmatrix} \square & -2 \\ -4 & \square \end{pmatrix}$

B The inverse of $\begin{pmatrix} 5 & -2 \\ -7 & 3 \end{pmatrix}$ is $\begin{pmatrix} \square & 2 \\ \square & 5 \end{pmatrix}$

C The inverse of $\begin{pmatrix} -2 & -3 \\ 4 & 5 \end{pmatrix}$ is $\begin{pmatrix} 2.5 & 1.5 \\ \square & \square \end{pmatrix}$

D The inverse of $\begin{pmatrix} 6 & -2.5 \\ -7 & 3 \end{pmatrix}$ is $\begin{pmatrix} \square & 5 \\ \square & \square \end{pmatrix}$

E Given that $A = \begin{pmatrix} -5 & -2 \\ 10 & 3 \end{pmatrix}$

$A^{-1} = \dfrac{1}{\square}\begin{pmatrix} \square & \square \\ -10 & -5 \end{pmatrix}$

F Given that $B = \begin{pmatrix} -3 & -2 \\ 9 & 7 \end{pmatrix}$

$B^{-1} = \dfrac{1}{\square}\begin{pmatrix} -7 & -2 \\ \square & \square \end{pmatrix}$

G The inverse of $\begin{pmatrix} -0.5 & 1.5 \\ 4 & -9 \end{pmatrix}$ is $\begin{pmatrix} \square & \square \\ \frac{8}{3} & \frac{1}{3} \end{pmatrix}$

H The inverse of $\begin{pmatrix} -3 & 4 \\ 1 & 2 \end{pmatrix}$ is $\dfrac{1}{\square}\begin{pmatrix} -2 & 4 \\ 1 & \square \end{pmatrix}$

I The matrix $\begin{pmatrix} -3 & 4 \\ a & 3 \end{pmatrix}$ is self-inverse. Find the value of a.

J The matrix $\begin{pmatrix} -9 & -10 \\ a & b \end{pmatrix}$ is self-inverse. Find the values of a and b.

K Given $A = \begin{pmatrix} -3 & 1 \\ 0 & -1 \end{pmatrix}$ and $B = \begin{pmatrix} 2 & 4 \\ -1 & 1 \end{pmatrix}$,

$(AB)^{-1} = \dfrac{1}{\square}\begin{pmatrix} -1 & \square \\ \square & -7 \end{pmatrix}$

L Given $A = \begin{pmatrix} -1 & -3 \\ -2 & 5 \end{pmatrix}$ and $B = \begin{pmatrix} 5 & -3 \\ 3 & -2 \end{pmatrix}$,

$B^{-1}A^{-1} = \begin{pmatrix} \square & \square \\ \square & -4 \end{pmatrix}$

To get the three-digit code, add together all the numbers in the boxes.