## NAME

$\qquad$

Write your birthday as a $3 \times 1$ matrix as follows:

$$
\left(\begin{array}{c}
\mathrm{mo} \\
\text { day } \\
\mathrm{yr}
\end{array}\right)
$$

(use two digits for the year.) Now compute the $3 \times 1$ matrix

$$
\left(\begin{array}{ccc}
2 & 1 & -1 \\
1 & 2 & -1 \\
1 & -1 & 2
\end{array}\right) \times\left(\begin{array}{c}
\mathrm{mo} \\
\text { day } \\
\mathrm{yr}
\end{array}\right)
$$


(This is an example of secret coding, anyone who knows what $3 \times 3$ matrix you used can recover your birthday from the $3 x 1$ matrix you computed.)


