PRINT Your Name: $\qquad$

## Quiz for January 15, 2004

Write out the multiplication table for the following set of matrices over $\mathbb{Q}$ :

$$
A=\left[\begin{array}{ll}
1 & 0 \\
0 & 1
\end{array}\right], \quad B=\left[\begin{array}{cc}
-1 & 0 \\
0 & 1
\end{array}\right], \quad C=\left[\begin{array}{cc}
1 & 0 \\
0 & -1
\end{array}\right], \quad \text { and } \quad D=\left[\begin{array}{cc}
-1 & 0 \\
0 & -1
\end{array}\right] .
$$

## ANSWER:

$$
\begin{array}{lllll} 
& A & B & C & D \\
A & A & B & C & D \\
B & B & A & D & C \\
C & C & D & A & B \\
D & D & C & B & A
\end{array}
$$

