The matrix

$$
C=\left[\begin{array}{ccc}
3 & 0 & 0 \\
16 & -5 & -8 \\
-8 & 4 & 7
\end{array}\right]
$$

has two distinct eigenvalues with $\lambda_{1}<\lambda_{2}$ ．
The smaller eigenvalue $\lambda_{1}=\square$ has multiplicity $\square$ and the dimension of the
corresponding eigenspace is $\square$ ．
The larger eigenvalue $\lambda_{2}=\square$ has multiplicity $\square$ and the dimension of the corresponding eigenspace is $\square$
Is the matrix $C$ diagonalizable？
？

The matrix

$$
C=\left[\begin{array}{ccc}
3 & 0 & 0 \\
16 & -5 & -8 \\
-8 & 4 & 7
\end{array}\right]
$$

has two distinct eigenvalues with $\lambda_{1}<\lambda_{2}$ ．
The smaller eigenvalue $\lambda_{1}=-1$ has multiplicity 1 and the dimension of the corresponding eigenspace is 1 ．

The larger eigenvalue $\lambda_{2}=3$ has multiplicity $\quad 2$ and the dimension of the corresponding eigenspace is $\square$
Is the matrix $C$ diagonalizable？
diagonalizable

