Show all work clearly and in order, and box your final answers. You have 10 minutes to take this quiz.

1. (5 points) Compute the following vector.

\[
\begin{pmatrix}
3 & -2 \\
2 & 0
\end{pmatrix}
\begin{pmatrix}
1 & -1 \\
4 & 1
\end{pmatrix}
\begin{pmatrix}
-1 \\
2
\end{pmatrix}
\]

2. (10 points) Solve the following system of equations.

\[
\begin{cases}
3x_2 - 2x_3 = 3 \\
2x_1 + x_3 = 8 \\
x_1 - x_2 = 4
\end{cases}
\]