Use the simplex method to solve the following problem. Minimize

\[ C = 20x + 30y + 36z \]

subject to

\[ x + 2y + 3z \geq 48 \]
\[ 2x + 2y + 3z \geq 70 \]
\[ 2x + 3y + 4z \geq 96 \]
\[ x \geq 0 \]
\[ y \geq 0 \]
\[ z \geq 0 \]

Show your work. In class students should show the dual problem and the simplex matrix.