1. Find the inverse of the matrix \(
\begin{bmatrix}
8 & 6 \\
5 & 4
\end{bmatrix}
\) and USE IT to solve the system of equations

\[
\begin{align*}
8x_1 + 6x_2 &= 2 \\
5x_1 + 4x_2 &= -1.
\end{align*}
\]

2. True/False don’t need to justify. **All matrices are** \(n \times n\) **for this exercise.**
   
   a) If the equation \(Ax = b\) has more than one solution for at least one \(b \in \mathbb{R}^n\), then the matrix \(A\) is invertible.
   
   b) If \(A^T\) is not invertible, then \(A\) is not invertible.
   
   c) If matrices \(E\) and \(F\) have the property that \(EF = I\), then \(EF = FE\).
   
   d) If \(K\) is an invertible matrix then, \(AK = KA\) for all other \(n \times n\) matrices \(A\).
   
   e) If \(A\) and \(B\) are invertible \(AB\) is invertible and the inverse is \(A^{-1}B^{-1}\).