I. Solve the following matrix equations:

1.  Ans.: 
2. $\left(\begin{matrix}1&1\\4&3\end{matrix}\right)⋅X-X=\left(\begin{matrix}1&-1\\2&-3\end{matrix}\right)$ Ans.: $X=\left(\begin{matrix}0&-\frac{1}{4}\\1&-1\end{matrix}\right)$
3. $ X-X⋅\left(\begin{matrix}7&5\\4&3\end{matrix}\right)=\left(\begin{matrix}-2&1\\1&-1\end{matrix}\right)$ Ans.: $X=\left(\begin{matrix}-1&2\\\frac{3}{4}&-\frac{11}{8}\end{matrix}\right)$
4.  Ans.: $X=\left(\begin{matrix}-114&-71&84\\20&13&-15\\-87&-54&64\end{matrix}\right)$

II. Apply elementary row operation to transform the matrix into echelon form:

1. 

2. $\left(\begin{matrix}1&2&5\\-1&1&-4\\-1&4&-3\\1&-4&7\\1&2&1\end{matrix}\right)$

III. Apply elementary row operation to find the inverse of the matrix:

1.  Ans.: **** = 

2. Find the inverse of  Ans.: **** = 