

For each of the following matrices, either find its inverse or prove that it is not invertible. Both are matrices over \mathbb{R} .

$$\begin{pmatrix} 2 & 2 & 0 \\ 1 & 1 & \frac{1}{2} \\ 3 & 4 & 5 \end{pmatrix}$$

$$\begin{pmatrix} 1 & 2 & 4 & 3 \\ 0 & 7 & 1 & \frac{1}{3} \\ 2 & 25 & 11 & 7 \\ 0 & 1 & 0 & 1 \end{pmatrix}$$