

## Additional Activities: Think-Share-Pair-Compare 2.2

1. Is  $P^{-1}AP = A$ ? Respond on pollev if you have tech:
  - a) yes
  - b) no

2. If the elementary matrix  $E = \begin{bmatrix} 1 & 0 & 0 \\ 0 & 1 & 0 \\ 0 & -2 & 1 \end{bmatrix}$  acts on  $B$  via left multiplication, what row operation is  $E$ ? Write in usual notation.
3. If  $A$  is invertible, how many solutions does the matrix vector system  $A\vec{x} = \vec{b}$  have?
4. In the 2.2 intro video, I mentioned a socks-shoes analogy to help us remember that  $(AB)^{-1} = B^{-1}A^{-1}$ . Create your own analogy to express what  $(ABC)^{-1}$ , for three matrices, is and select one from your group to write on a board.
5. What is the inverse of  $\begin{bmatrix} a & b \\ c & d \end{bmatrix}$ ? The determinant?
6. Lastly, review 2.2 fill-in guide items, look at or work on upcoming items, or chat until I bring us back together