Bell Ringer

You and your friend are working on a matrix addition problem. You come across this one:

$$\begin{bmatrix} 1 & 2 & 3 \\ 3 & 4 & 1 \\ 6 & 1 & 9 \\ 3 & 5 & 3 \\ 9 & 2 & 0 \end{bmatrix} + \begin{bmatrix} 1 & 2 & 3 & 3 & 9 \\ 3 & 4 & 1 & 6 & 1 \\ 6 & 1 & 9 & 2 & 5 \end{bmatrix}$$

You remember your teacher saying that two matrices had to be the same dimensions to add them. Your friend says, since addition is commutative, we can flip one of those matrices to make them the same dimensions and we can solve it. Are they correct? Why or why not?

If they are correct, solve this problem. If they are incorrect make up a new problem that can be solved.