# *Additional Activities: Think-Share-Pair-Compare 1.4*

1. What is the 1st coordinate of the product $\begin{bmatrix} 1 & 2 & 3 \\ 4 & 5 & 6 \\ 7 & 8 & 9 \end{bmatrix} \begin{bmatrix} x_1 \\ x_2 \\ x_3 \end{bmatrix}$?
2. Which method is faster to compute that first entry? Respond on our usual pollev if you have tech:
   a) the linear combinations of the columns of $A$ using weights from $\vec{x}$ method
   b) the dot products of rows of $A$ with $\vec{x}$ method
   c) they would be equally fast
3. Revisit `https://www.geogebra.org/m/Dq2A7aRv` of linear combinations & Red-Green-Blue (*RGB*) visualization in $\mathbb{R}^3$. What are the entries of the *RGB* matrix so that $RGB \begin{bmatrix} a \\ b \\ c \end{bmatrix} = \vec{d}$? Discuss. Then move the weights, select 1 per group, and sketch the result on a board.
4. Lastly, review 1.4 fill-in guide items, look at or work on upcoming items, or chat until I bring us back together