

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> which shows us how linear combinations relate to Red-Green-Blue (RGB) visualization in \mathbb{R}^3 . What are the

entries of the RGB matrix so that $RGB \begin{bmatrix} a \\ b \\ c \end{bmatrix} = \vec{d}$?

4. Lastly, review 1.4 and the fill-in guide, look at upcoming activities or chat until I bring us back together