Additional Activities: Think-Share-Pair-Compare 3.1–3.3

1. If a square matrix A has determinant 8, what can we say, if anything, about the number of solutions to $A\vec{x} = \vec{b}$?

2. Does replacement, like $r_3' = -2r_1 + r_3$, impact determinant? Why? Write a reason from your group on a board.

3. Revisit *RGB*, the red, green, and blue matrix connected to https://www.geogebra.org/m/Dq2A7aRv. What is the determinant of *RGB*?

4. We find that for a square coefficient matrix A, the homogeneous matrix equation $A\vec{x} = \vec{0}$ has a free parameter. This means that...
   a) the determinant, $|A| \neq 0$
   b) $|A| = 0$
   c) this tells us nothing about the determinant

   Respond on our usual pollev if you have tech.

5. Lastly, review 3.1–3.3 fill-in guide items, look at or work on upcoming items, or chat until I bring us back together