LINEAR ALGEBRA PROJECT
Part 1: Span

Instructions: You will be given two vectors in for R^2 from which to make a new parallelogram grid (on top of an ordinary Cartesian grid). You will also be given two vectors to locate on the two grids.

   0. Put your name and project number at the top of each page. Your work throughout should be neat … very neat and organized. Work on graph paper.

   1. Graph $\vec{v}_1$ in red and $\vec{v}_2$ in blue.

   2. Create a parallelogram grid using $\vec{v}_1$ and $\vec{v}_2$. (This is a foreshadow of B-coordinates).

   3. Treating the vector $\vec{x}$ like a position vector, how many $\vec{v}_1$'s and $\vec{v}_2$'s are required to get to $\vec{x}$. (This is a foreshadow of finding $[\vec{x}]_B$ given $\vec{x}$).

   4. Graph the vector that is _____ units in the $\vec{v}_1$ direction and _____ units in the $\vec{v}_2$ direction. Label this point as $\vec{y}$ and find its coordinates on the Cartesian grid. (This is a foreshadow of finding $\vec{y}$ given $[\vec{y}]_B$).

Submit your graphs and work via Gradescope