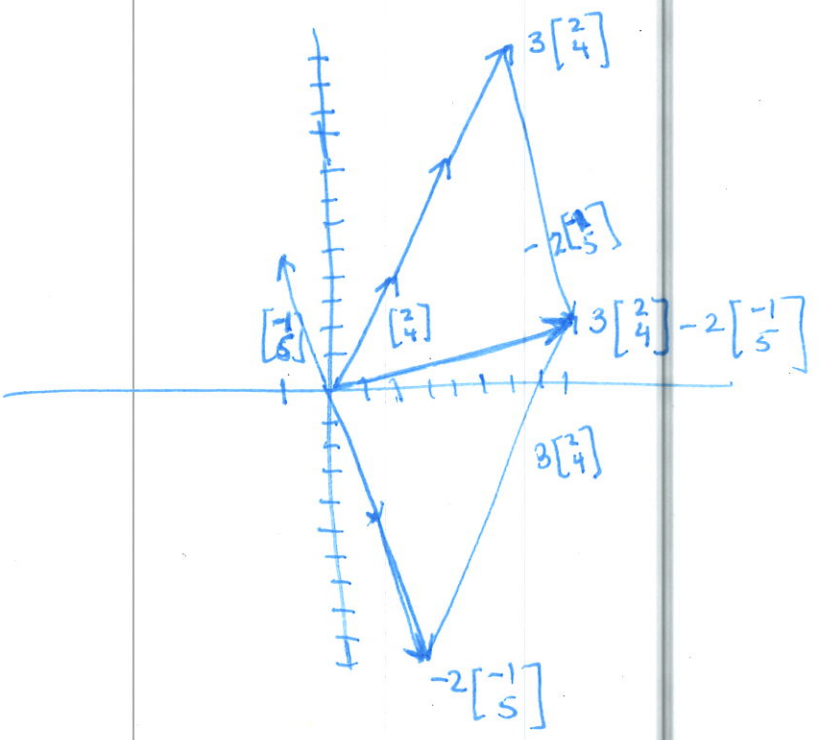
MTH 266, Quiz #2, Fall 2018 Name KEY

Instructions: Show all work. Use exact answers unless otherwise asked to round.

1. Consider the expression $3\begin{bmatrix}2\\4\end{bmatrix} - 2\begin{bmatrix}-1\\5\end{bmatrix}$.
   a. Sketch a graphical representation of this expression using vectors.



   b. Describe in words what the scalars 3 and -2 represent in the sketch.

3 means that we are scaling the vector $\begin{bmatrix}2\\4\end{bmatrix}$ 3 times longer in the same direction as $\begin{bmatrix}2\\4\end{bmatrix}$

-2 means we are scaling the vector $\begin{bmatrix}-1\\5\end{bmatrix}$ such the length of original vector but pointed in opposite direction