

Exercise 1 Suppose that $\vec{\mathbf{u}} = \langle 3, -1 \rangle$ and $\vec{\mathbf{v}} = \langle 1, 1 \rangle$. Find a vector $\vec{\mathbf{w}}$ of magnitude 3 that is parallel to $2\vec{\mathbf{u}} - 5\vec{\mathbf{v}}$.

$$\vec{\mathbf{w}} = \left\langle \boxed{\frac{3}{\sqrt{50}}}, \boxed{\frac{-21}{\sqrt{50}}} \right\rangle$$
