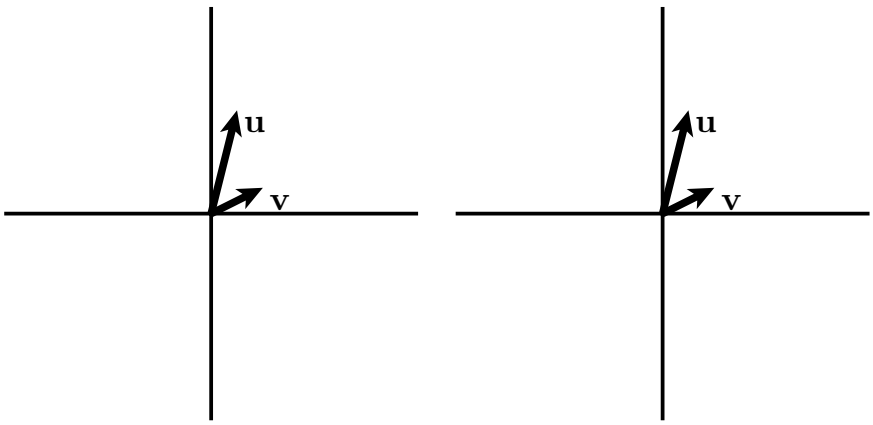
Math 211 Practice Working with Vectors



Suppose that **u** and **v** are the vectors shown above.

1. On the left set of axes, sketch the vectors $-3\mathbf{v}$, $-2\mathbf{v}$, $-\mathbf{v}$, $2\mathbf{v}$, and $3\mathbf{v}$.
2. What is $0\mathbf{v}$?
3. Give a geometric description of the set of terminal points of the vectors $t\mathbf{v}$ where t is any scalar (real number).

4. On the right set of axes, sketch the vectors $\mathbf{u} + \mathbf{v}$, $\mathbf{v} - \mathbf{u}$, $\mathbf{u} + 2\mathbf{v}$, and $\mathbf{u} - 2\mathbf{v}$.
5. Give a geometric description of the set of terminal points of the vectors $\mathbf{u} + t\mathbf{v}$ where t is any scalar.

Adapted from *Active Calculus* by S. Schlicker, D. Austin, and M. Boelkins