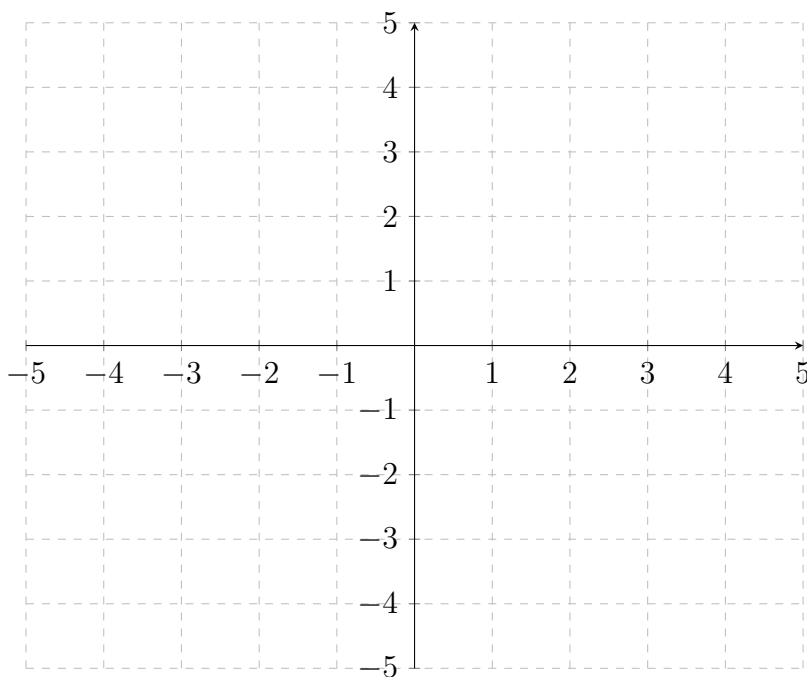


### Quick Hit 11

1. Consider the vectors  $\vec{v} = -2\vec{i} + \vec{j}$  and  $\vec{w} = \vec{i} - \vec{j}$ .

(a) Draw and label the vectors  $\vec{v}$ ,  $\vec{w}$ ,  $\vec{v} + \vec{w}$ , and  $2\vec{w} - \vec{v}$  on the following axes.



(b) What is the unit vector decomposition of  $2\vec{w} - \vec{v}$ ?

2. Consider the vector  $\vec{u} = -3\vec{i} - 2\vec{j}$ . Find the polar form of  $\vec{u}$  (i.e. find  $\|\vec{u}\|$  and find the angle that  $\vec{u}$  makes with the horizontal).