

# 1. Vectores

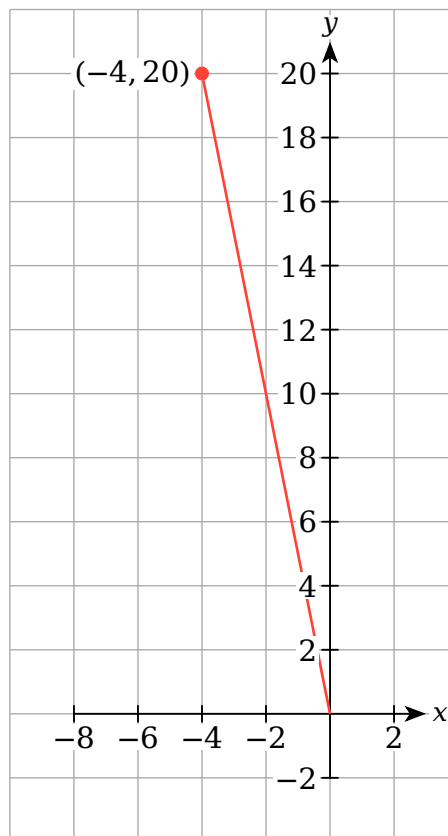
## Vectores en dos y tres dimensiones

2. Dibujar cada uno de los múltiplos escalares de  $\vec{v} = [-1, 5]$

- a)  $4\vec{v}$
- b)  $-\frac{1}{2}\vec{v}$
- c)  $0\vec{v}$
- d)  $-6\vec{v}$

**a)  $4\vec{v}$**

$$4\vec{v} = 4[-1, 5]$$
$$[-4, 20]$$

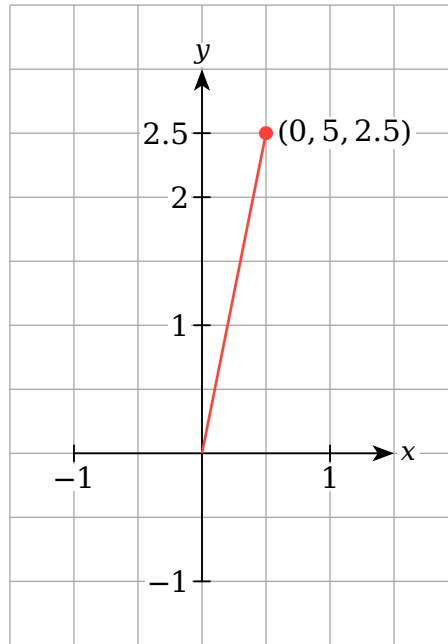


**b)**  $-\frac{1}{2}\vec{v}$

$$-\frac{1}{2}\vec{v} = -\frac{1}{2}[-1, 5]$$

$$\left[\frac{1}{2}, -\frac{5}{2}\right]$$

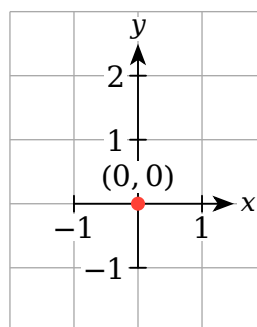
$$[0.5, 2.5]$$



**c)**  $0\vec{v}$

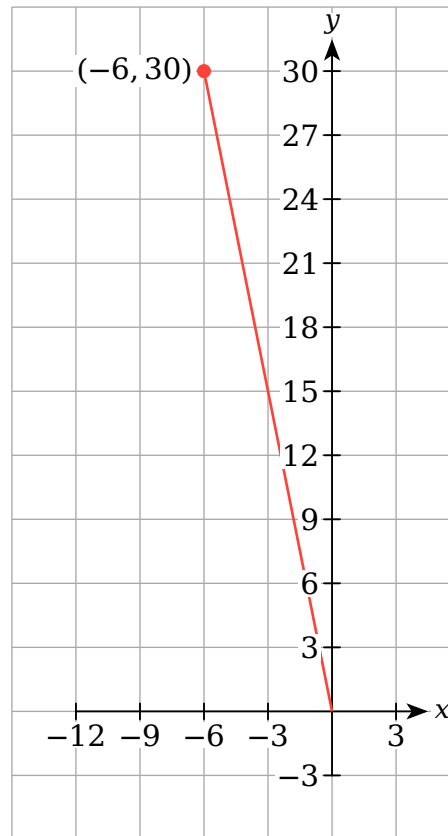
$$0\vec{v} = 0[-1, 5]$$

$$[0, 0]$$



**d)**  $-6v$

$$\begin{aligned}-6\vec{v} &= -6[-1, 5] \\ &[-6, 30]\end{aligned}$$



4. Hallar el vector  $\vec{v} = 5\vec{u} - 3\vec{w}$  donde  $\vec{u} = [2, -1]$  y  $\vec{w} = [1, 2]$ . Ilustrar geométicamente la operación vectorial

$$5\vec{u} = 5[2, -1] = [10, -5]$$

$$3\vec{w} = 3[1, 2] = [3, 6]$$

$$\vec{v} = 5\vec{u} - 3\vec{w} = [10, -5] - [3, 6] = [7, -11]$$

