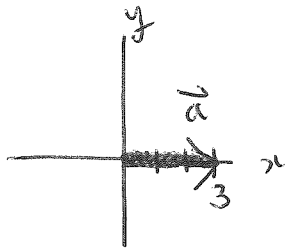
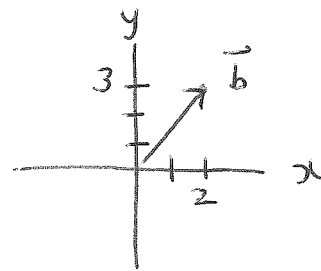


Section 1.1

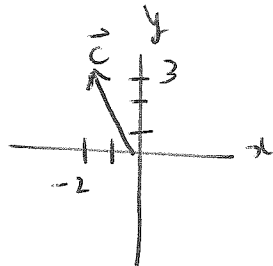
① a)



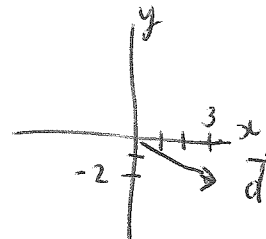
b)



c)

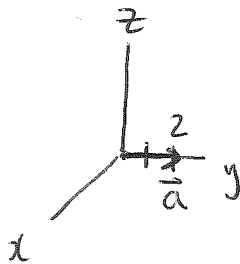


d)

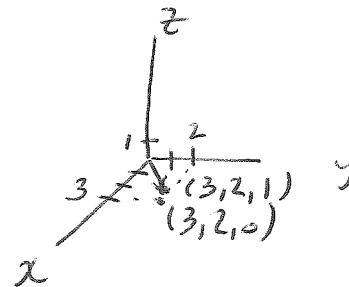


③

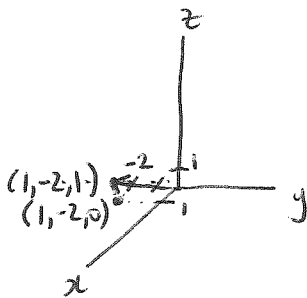
a)



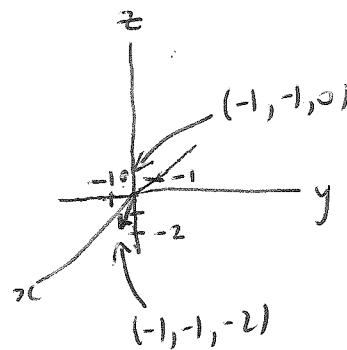
b)



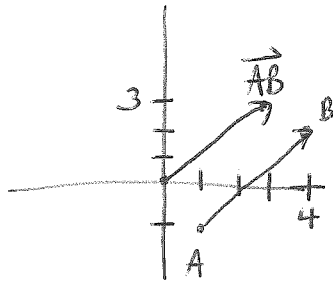
c)



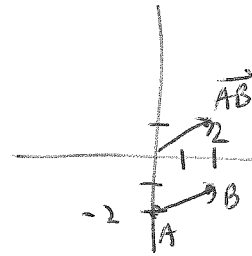
d)



(5) a)

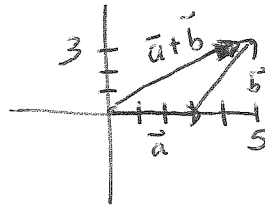


b)



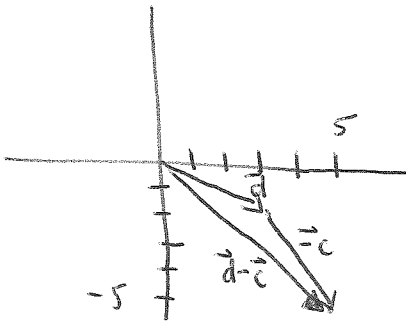
(7)

$$\vec{a} + \vec{b} = \begin{bmatrix} 5 \\ 3 \end{bmatrix}$$



(9)

$$\vec{d} - \vec{c} = \begin{bmatrix} 5 \\ -5 \end{bmatrix}$$



(13)

$$\vec{u} = [1 \cos 60^\circ, 1 \sin 60^\circ] = \left[\frac{1}{2}, \frac{\sqrt{3}}{2} \right]$$

$$\vec{v} = [-1 \cos 30^\circ, -1 \sin 30^\circ] = \left[-\frac{\sqrt{3}}{2}, -\frac{1}{2} \right]$$

$$\vec{u} + \vec{v} = \frac{1}{2} [1 - \sqrt{3}, \sqrt{3} - 1]$$

$$\vec{u} - \vec{v} = \frac{1}{2} [1 + \sqrt{3}, \sqrt{3} + 1]$$

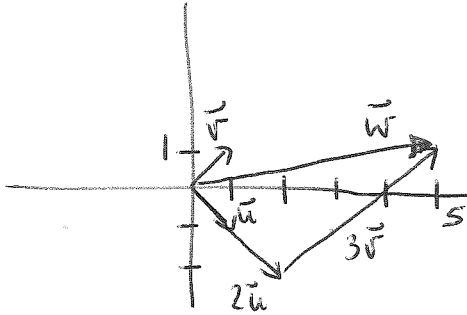
$$(17) \quad \vec{x} - \vec{a} = 2(\vec{x} - 2\vec{a})$$

$$\vec{x} - \vec{a} = 2\vec{x} - 4\vec{a}$$

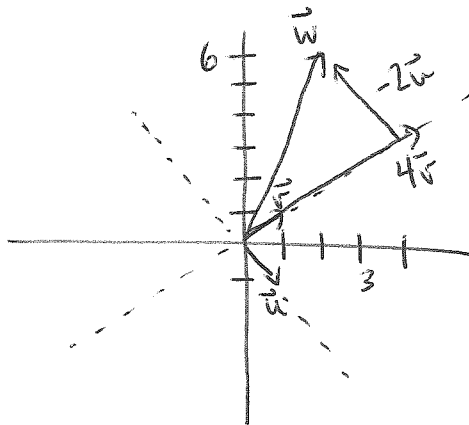
$$-\vec{x} = -3\vec{a}$$

$$\vec{x} = 3\vec{a}$$

(19)



(21)



$$\vec{w} = 4\vec{v} - 2\vec{u}$$

$$\text{or } \vec{w} = -2\vec{u} + 4\vec{v}$$