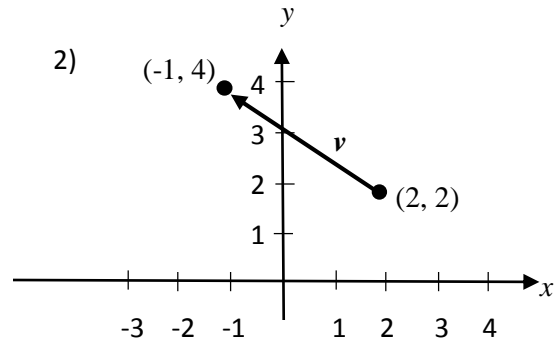
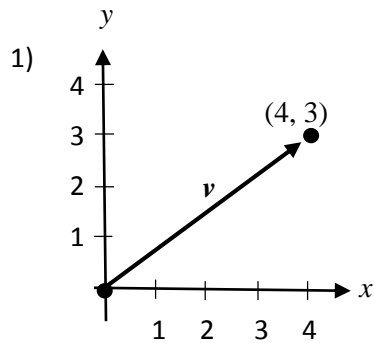


Component Form of a Vector

For each of the following (a) find the component form of the vector
 (b) sketch the vector in standard position



3) initial point: $(3, -2)$
 terminal point: $(3, 3)$

4) initial point: $(5/2, 1)$
 terminal point: $(-2, -3/2)$

5) tail: $(-3, -5)$
 head: $(5, 1)$

6) tail: $(-4.2, 5)$
 head: $(3.7, -12.9)$

Vector Operations

For each of the following, find: (a) $\mathbf{u} + \mathbf{v}$
 (b) $\mathbf{u} - \mathbf{v}$
 (c) $2\mathbf{u} - 3\mathbf{v}$
 (d) $\mathbf{v} + 4\mathbf{u}$

7) $\mathbf{u} = \langle 4, 2 \rangle$ and $\mathbf{v} = \langle 7, 1 \rangle$

8) $\mathbf{u} = \langle -5, -2 \rangle$ and $\mathbf{v} = \langle -4, 0 \rangle$