

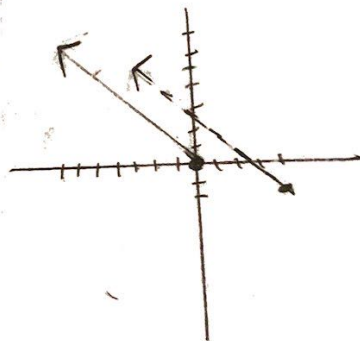
Warmup #2: Intro to Vectors

1. Initial point, ^(Tail) $(4, -2)$; Terminal Point, ^(Head) $(-3, 5)$.

a) find the component form of the vector. ^{Head - Tail}
^{Terminal - Initial}

b) sketch in standard position.

$$\langle -3-4, 5-(-2) \rangle = \boxed{\langle -7, 7 \rangle}$$



2. Use $u = \langle 4, -2 \rangle$ and $v = \langle -3, 5 \rangle$, to find:

a) $u+v = \langle 4, -2 \rangle + \langle -3, 5 \rangle = \boxed{\langle 1, 3 \rangle}$

b) $v-u = \langle -3, 5 \rangle - \langle 4, -2 \rangle = \boxed{\langle -7, 7 \rangle}$

c) $v+4u = \langle -3, 5 \rangle + 4\langle 4, -2 \rangle = \langle -3, 5 \rangle + \langle 16, -8 \rangle = \boxed{\langle 13, -3 \rangle}$

d) $2u-3v = 2\langle 4, -2 \rangle - 3\langle -3, 5 \rangle = \langle 8, -4 \rangle + \langle 9, -15 \rangle = \boxed{\langle 17, -19 \rangle}$