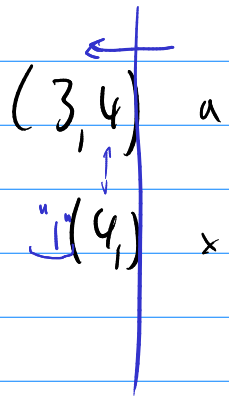
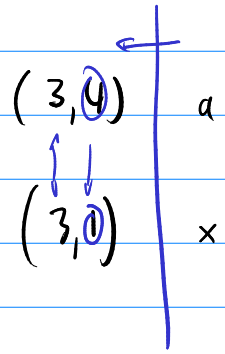

(3, 4)
a
"1"(4, 1)
x


(3, 4)
a
(3, 1)
x

Linear Algebra and Computation

What is a vector?

The real question is what we want from a vector.

What do we want to do with it?

What on earth are you talking about?

So, is a plain old number a vector, too?

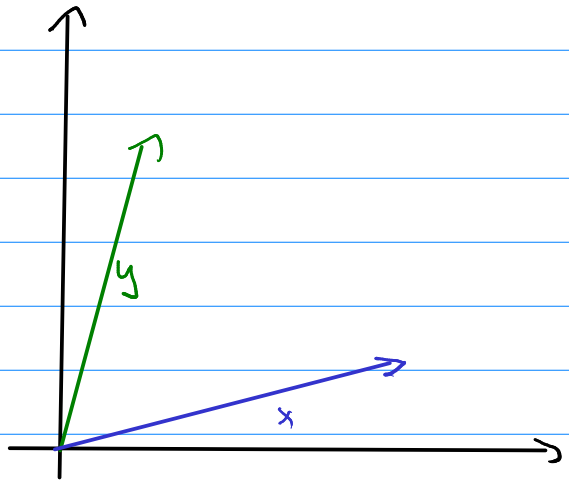
What else can be viewed a vector?

So how are all these things similar?

What are some useful things one can do in a vector space?

What do these look like visualized in the plane?

(if we allow *all* possible combinations of each type)



If vectors can be arbitrarily weird, can we still describe them with numbers?

Can we use coordinates to describe interesting operations on vectors?

So what can matrices do?

2 Norms

Problem with Scientific Computing: The answer always is always wrong.

Natural question: How wrong?

Need a measure of distance.

Actually: A measure of the length of a vector is fine, too. Why?

So how do we compute a 'norm'?

Get to the point.