

Introduction to *Geometric vectors*

What you need to know already:

- Nothing more than you needed for Chapter 0!

What you can learn here:

- What this chapter is all about.

You have seen *vectors* before, most likely in physics courses. You should be familiar with them from all kinds of everyday applications. They are visible, useful and easy to manipulate. And... they are the basic building blocks from which we shall develop everything else we'll do in this course.

So?

So, we shall start our adventures in linear algebra from something that should not create any difficulties and few surprises.

Are you trying to say that this chapter will be just a review of things I have learned before?

To a large extent, yes, since this first chapter is meant to clarify some basic ideas about 2 and 3 dimensional vectors. In particular, here you shall see :

- their formal definition,
- their geometric representation (hence the adjective that characterizes them),

- the notation we shall use to refer to them and
- some of their basic features and operations.

But, as it is so common in linear algebra, we shall also move beyond these basics and look at other aspects of vectors that may not be familiar to you. Hence use this chapter to build a good foundation for what comes later, and don't be lulled into a false sense of security: if you make the mistake of underestimating this chapter you may find yourself in hot waters later!

Yeah, yeah, I have heard that before!

I am sure, but I am not trying to scare you, only to warn you not to be fooled by the simplicity of this chapter and believe that all later chapters will be equally easy. Everything I will present in these Notes is within the grasp of your understanding, but be prepared to put in more and more intellectual effort.

But enough scary stuff: enjoy the familiar while you can...

What questions do you have for your instructor?

Here, as in all later sections, take note of any question that comes to your mind in relation to the content of this section. And don't be shy about asking those questions: instructors appreciate and enjoy their students' questions! When they don't show it, maybe it's because they are having a bad day! ☺ So, be persistent in asking questions, while improving you skills in formulating and presenting them.

