

This is the stuff you would say prior to starting the enumerated section shown below. Notice, that the stuff inside the `enumerate` section is indented by the same amount.

Here is the second paragraph of important things to say. Forgive me if I go for a bit more here just to fill the space.

1. This is an example of an in-line equation $y = ax_1 + bx_2$. The variables x_1 and x_2 have their own means, μ_1 and μ_2 . If you think about it, they must also have their own variances, σ_1^2 and σ_2^2 . Let's write out some equations without equation numbers, each centered on its own line. We can do this with the following LaTeX commands

$$E(y) = E(ax_1 + bx_2) = E(ax_1) + E(bx_2)$$

$$E(ax_1) = \int_{-\infty}^{\infty} ax_1 dx_1 .$$

Check out the cool period at the end of the sentence that just happens to have an equation in it. A more basic version of the same equations uses only basic TeX commands and produces

$$E(y) = E(ax_1 + bx_2) = E(ax_1) + E(bx_2)$$

$$E(ax_1) = \int_{-\infty}^{\infty} ax_1 dx_1 .$$

For our purposes, these two ways of creating stand-alone equations act the same way and produce identical results.

2. Now, let's write two equations, each with its own line and equation number. I can do this with something like

$$x = 3s \tag{1}$$

$$y = 7x . \tag{2}$$

Or, if I'm feeling really bold, I could use an `array` of equations that would look something like

$$\int_a^b x dx = \frac{1}{2} (b^2 - a^2) , \tag{3}$$

$$\frac{df}{dx} = \sin(x) , \tag{4}$$

$$z = 7 . \tag{5}$$

Notice that the stuff between the `&` symbols in the `.tex` file is aligned. Also, notice the nice usage of commas and periods. Many people are picky about such punctuation.

However, if I need to, I can make an equation array *without* equation numbers, like this:

$$\int_a^b x dx = \frac{1}{2} (b^2 - a^2) ,$$

$$\frac{df}{dx} = \sin(x) ,$$

$$z = 7 .$$

In case you didn't notice, I used an "italic correction" to make the spaces look right after the word *without* in italics.

3. Jeeze, I bet you thought I would forget to put in a second part to the enumeration section. Fooled you.

4. To make up for it, I am adding a third section. But now, let's get out of the enumerate mode.

Oh, finally, this is some stuff outside of the enumeration limits. It is just normal material that you would type. The best I can say here is, blah, blah, blah, blah, blah, blah, blah.

This is the start of a new paragraph. And still, the best I can say here is, blah, blah, blah, blah, blah, blah, blah.

But note, if you ever wanted to say, "blah, blah, blah, blah, blah, blah, blah," and not have it indented, you would use the `noindent` command shown in the `.tex` file of this document.