

1

You can type: } { # ^ _ \$ % & ã ~ \ \

According to “Newton’s Method”, you can approximate the roots of a differentiable function $f(x)$ starting from an initial point x_0 and then setting

$$x_{n+1} = x_n - \frac{f(x_n)}{f'(x_n)}, \quad \text{for } n \geq 0.$$

2

I can p#"\begin{ _^&1rintp98 23lkjb% anything I like be s
I can p#"rintp98 23lkjb% anything I like be @s

3

\verb|I can p#"\begin{ _^&1rintp98 23lkjb% anything I like be s|
\verb@I can p#"rintp98 23lkjb%@ anything I like be @s

4

Understanding the greenhouse effect

The **greenhouse effect** is the warming that happens when *certain gases in Earth’s atmosphere trap heat*. These gases let in light but keep heat from escaping, like the glass walls of a greenhouse, hence the name.

5

Normal text: text in roman serif
Italics: *this is in italics*
Typewriter font: `this is in a typewriter font`
Bold: **this is emboldened**
Medium bold: **this is slightly emboldened**
Sans serif: **this is san serifed**
Slanted: *slanted text!*
Small caps: SMALL CAPS!
Emphasis: *I’m important*
Upright text: Upright text

Note every opening brace must have a matching closing brace.
This it is really important because L^AT_EX gives an error whenever the braces do not match
This is in italics.

6

This is a wonderfully centered line

This is a slightly darker font!

This is slightly lighter font!

The names of the font commands appear to be slightly idiosyncratic, but there is some logic. The font declarations let you choose between three pre-defined font *families*:

- `\rmfamily` selects a roman, or serified, font family (`\textrm`)
- `\sffamily` selects a sans serif font family (`\textsf`)
- `\ttfamily` selects a monospaced “typewriter” font family (`\texttt`)

Within each font family, we can then select fonts in one of the two the *series*, which determine the stroke-width:

- `\mdseries` regular (`\textmd`)
- `\bfseries` bold (`\textbf`)

Finally, we select *shape* of the font, which dictates the form of the letters:

- `\upshape` gives upright text (`\textup`)
- `\slshape` gives slanted text (`\textsl`)
- `\itshape` gives italic text (`\textit`)
- `\scshape` gives text in Caps and SmallCaps (`\textsc`)

7

This is italics and if we are lucky this is bold italics!

This is bold and if we are lucky this is bold italics!

This is italics and if we are lucky this is bold italics!

This is bold and if we are lucky this is bold italics!

This is italics and if we are lucky this is bold italics!

This is bold and if we are lucky this is bold italics!

8

this is really tiny

subscripts are this size

are this big

this is small text

this is the default size

slightly larger text
even larger text
getting big now
now we are onto huge
completely hugemongous

9
Compare a_{b_c} with ab_c

10
Compare a_{b_c} with ab_c

11

Impacts of 1.5°C global warming on natural and human systems

Human-induced global warming has already caused multiple observed changes in the climate system

(high confidence). Changes include increases in both land and ocean temperatures, as well as more frequent heatwaves in mostland regions *(high confidence)*. There is also

(high confidence) global warming has resulted in an increase in the frequency and duration of marine heatwaves. Further, there is substantial evidence that human-induced global warming has led to an increase in the frequency, intensity and/or amount of heavy precipitation events at the global scale *(medium confidence)*, as well as an increased risk of drought in the Mediterranean region

(medium confidence).
{3.3.1, 3.3.2, 3.3.3, 3.3.4, Box 3.4}

12
The Earth's climate has changed throughout history. Just in the last 650,000 years there have been seven cycles of glacial advance and retreat, with the abrupt end of the last ice age about 11,700 years ago marking the beginning of the modern climate era — and of human civilization. Most of these climate changes are attributed to very small variations in Earth's orbit that change the amount of solar energy our planet receives.

The current warming trend is of particular significance because most of it is extremely likely (greater than 95 percent probability) to be the result of

human activity since the mid-20th century and proceeding at a rate that is
unprecedented over decades to millennia.

Earth-orbiting satellites and other technological advances have enabled
scientists to see the big picture, collecting many different types of information
about our planet and its climate on a global scale. This body of data,
collected over many years, reveals the signals of a changing climate.

The heat-trapping nature of carbon dioxide and other gases was demonstrated
in the mid-19th century. Their ability to affect the transfer of infrared energy
through the atmosphere is the scientific basis of many instruments flown by
NASA. There is no question that increased levels of greenhouse gases must
cause the Earth to warm in response.i

13

This sentence is not indented

This sentence is indented by 2cm.

14

I don't want your hope. I want you to panic.

I want you to feel the fear I do. Every day.

And want you to act. I want you to behave like our house is on
fire.

Because it is.

Greta Thunberg

15

Text spacing

A B (a "thin space") A\,B

A B (normal space) A\ B

A B (normal space) A B

A B (normal space) A\space B

A B (non-breaking normal space) A~B

A B (half a quad) A\enspace B

A B (quad space) A\quad B

A B (double quad space) A\qqquad B

A B (20mm hspace) $A\hspace{20mm}B$

H-space can be negative:

A B (negative hspace) $A\hspace{-10mm}B$

Math mode:

AB (negative thin “mu skip”) $A\!B$

$A B$ (a “med mu skip”) $A\!>B$

$A B$ (a “thick mu skip”) $A\;B$

[The `\verb` command is a useful L^AT_EX command for displaying “verbatim text”.
The special meaning of characters is disabled in between the two pipe symbols.]

16

Left right

Left middle right

Left right

Left middle right

Left _____ right

Left _____ middle _____ right

A centred line

A centred line

AA centred line

A centred line

17

18

tfirst
second
third

cfirst
second
third

bfirst
second
third
sfirst
second
third

19

1. **Food threat** Climate change is already taking a sizeable chunk out of global food supply and it is going to get worse.
 - The concentration of GHGs in the earth's atmosphere is directly linked to the average global temperature on Earth
 - ◇ Gosh!

20

United Nations Framework Convention on Climate Change

The UN family is at the forefront of the effort to save our

Kyoto Protocol By 1995, countries launched negotiations to strengthen the global

Paris Agreement At the 21st Conference of the Parties in Paris in 2015, Parties to

21

a1	a2	a3	a4	a5
b1	b2	b3	b4	b5
c1	c2	c3	c4	c5
d1	d2	d3	d4	d5

Letter	Column type
c	centred column
l	left justified column
r	right justified column
p{<width>}	a top-aligned paragraph of the specified width
@{...}	Insert ... in every row of the table
	a vertical line between the column

Left	Centred	Right	Paragraph
X	X	X	X
X	X	X	<p>Lorem ipsum dolor sit amet, consectetur adipiscing elit. Ut purus elit, vestibulum ut, placerat ac, adipiscing vitae, felis. Curabitur dictum gravida mauris. Nam arcu libero, nonummy eget, consectetur id, vulputate a, magna.</p>
X	X	X	<p>Lorem ipsum dolor sit amet, consectetur adipiscing elit. Ut purus elit, vestibulum ut, placerat ac, adipiscing vitae, felis. Curabitur dictum gravida mauris. Nam arcu libero, nonummy eget, consectetur id, vulputate a, magna.</p>

Left	Centred	Right	Paragraph
X			X X
X	X	X	<p>Lorem ipsum dolor sit amet, consectetur adipiscing elit. Ut purus elit, vestibulum ut, placerat ac, adipiscing vitae, felis. Curabitur dictum gravida mauris. Nam arcu libero, nonummy eget, consectetur id, vulputate a, magna.</p>
X	XYX		<p>Lorem ipsum dolor sit amet, consectetur adipiscing elit. Ut purus elit, vestibulum ut, placerat ac, adipiscing vitae, felis. Curabitur dictum gravida mauris. Nam arcu libero, nonummy eget, consectetur id, vulputate a, magna.</p>

22

Here is a some example text with a footnote¹

Here I refer back to the first footnote¹.

23

¹The first footnote!

By the time we see that climate change is really bad, your ability to fix it is extremely limited... The carbon gets up there, but the heating effect is delayed. And then the effect of that heat on the species and ecosystem is delayed. That means that even when you turn virtuous, things are actually going to get worse for quite a while.

Bill Gates

We are the first generation to be able to end poverty, and the last generation that can take steps to avoid the worse impacts of climate change.

Future generations will judge us harshly if we fail to uphold our moral and historical responsibilities.

Ban Ki-moon, Secretary-General, United Nations