

PreTeXt

A Slideshow

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At a Test Conference
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Abstract

An `<abstract>` can appear on an early slide, optionally. This is a standard component of a `PreTeXt <article>` (but not of a `<book>`). This is a second paragraph of the abstract for this wonderful talk, just so we have something a bit more substantial.

Contents

- 1 Explanation
- 2 Lists
- 3 Blocks and code
- 4 Sage Cell
- 5 More Elements
- 6 Other features
- 7 Vertical Alignment

Section 1

Explanation

What This Is

This is a PreTeXt slideshow designed mostly for testing new features. As of 2019-11-16 it is only initiated, and not comprehensive. If you improve a feature, please add examples here.

Section 2

Lists

Ordered Lists, All At Once

- ① Two conversions: print-on-demand, electronic PDF
- ② Extensive use of the `tcolorbox` package (CSS-like)
- ③ Evolving styling/themes (Andrew Rechnitzer, David Farmer)

Ordered Lists, With Features

These are enumerated with capital letters.

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And these have pauses.

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Unordered Lists, All At Once

- XML syntax is a nested hierarchy (a tree)
 - ▶ `<foo>...</foo>`
 - ▶ `<bar/>`
 - ▶ `<baz qux="corge">`
- Does not have to be *UGLY*!
- PreTeXt is “author-friendly” (Principle #2)

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Description Lists, All At Once

Central Processing Unit (CPU) Controls most of the activities of the computer, performs the arithmetic and logical operations, and contains a small amount of very fast memory.

Memory Provides storage for the instructions for the CPU and the data they manipulate.

Input/Output (I/O) Communicates with the outside world and with mass storage devices (e.g., disks).

Bus! A communication pathway with a protocol specifying exactly how the pathway is used. (The punctuation is just for testing.)

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Section 3

Blocks and code

Blocks: <definition>

Definition

Suppose that $\frac{d}{dx}F(x) = f(x)$. Then the **indefinite integral** of $f(x)$ is $F(x)$ and is written as

$$\int f(x) dx = F(x).$$

Blocks: <theorem>

This should also test other “theorem-like”, such as <corollary>.

Theorem (The Fundamental Theorem of Calculus.)

If $f(x)$ is continuous, and the derivative of $F(x)$ is $f(x)$, then

$$\int_a^b f(x) \, dx = F(b) - F(a)$$

Proof.

Left to the reader. □

Code

Here is an inline bit of code with surrounding text. `print("hello world")`. Here is a more text. And some more. And yet more. And a full program... with Prism support.

```
1  def f(x):
2      return x**2
3
4  # many intentional blank lines below...
5  # you may to zoom out, but at some point better to
6      scroll a long listing
7
8
9
10
11
12
13
14
15
```

Section 4

Sage Cell

Ramanujan and Integration

This Sage Cell is testing styling.

We have some mathematics on the page, to look for Javascript interference with MathJax. An identity due to Ramanujan:

$$\frac{1}{\left(\sqrt{\phi\sqrt{5}} - \phi\right)e^{\frac{2}{5}\pi}} = 1 + \frac{e^{-2\pi}}{1 + \frac{e^{-4\pi}}{1 + \frac{e^{-6\pi}}{1 + \frac{e^{-8\pi}}{1 + \dots}}}}.$$

```
numerical_integral(sin(x)^2, (0, 2))
```

(1.189200623826982, 1.320277913471315e-14)

And some more mathematics. An identity due to Ramanujan:

$$\frac{1}{\left(\sqrt{\phi\sqrt{5}} - \phi\right)e^{\frac{2}{5}\pi}} = 1 + \frac{e^{-2\pi}}{1 + \frac{e^{-4\pi}}{1 + \frac{e^{-6\pi}}{1 + \frac{e^{-8\pi}}{1 + \dots}}}}.$$

Section 5

More Elements

Displayed Mathematics

A single displayed equation, unnumbered on a slide.

$$\int_0^{\pi} \sin(x) \, dx = 2$$

And a multi-line display, with alignment on the equals signs.

$$\begin{aligned}(a + b)^2 &= (a + b)(a + b) \\ &= a^2 + ab + ba + b^2 \\ &= a^2 + 2ab + b^2\end{aligned}$$

Numbered Mathematics

A numbered equation on a slide, whose display also uses a macro defined in `<docinfo>`.

$$\int_0^1 x^2 dx = \frac{1}{3} \tag{1}$$

A Table

A `<tabular>` inside a `<table>`, whose title serves as a caption.

Format ^a	Engine	Output
reveal.js	browser ^b	HTML
Beamer	L ^A T _E X	PDF

^a A table note.

^b Another table note, of a differing length.

Conversions of a slideshow

Console Sessions

A `<console>` reproduces an interactive command-line session, input distinguished from output.

```
$ date
```

```
Thu Jul 2 10:00:00 PDT 2026
```

```
$ echo "PreTeXt"
```

```
PreTeXt
```

Quotations

The problem with quotes on the Internet is that it is hard to verify their authenticity.

—Abraham Lincoln

A `<blockquote>` can carry an `<attribution>`, as above.

Cross-References and URLs

A cross-reference to a block on another slide renders as static text, since a PDF slideshow has no knows: see Definition 1.

One with text from the target's title: The Fundamental Theorem of Calculus.

An external reference is live in capable outputs: `pretextbook.org`.

Section 6

Other features

Pausing

Pausing doesn't always act how you expect from $\text{\LaTeX}$. The first and third lines are always visible.

(Visible from the outset.)

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But this one needs you to advance the slide.

(Visible from the outset.)

Subslides

Subslides are another way to achieve pausing without lists.

But this is still visible from the outset.

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Subslides are another way to achieve pausing without lists. This is a subslide. It always comes after a pause.

- You can also pause within it.

But this is still visible from the outset.

Subslides

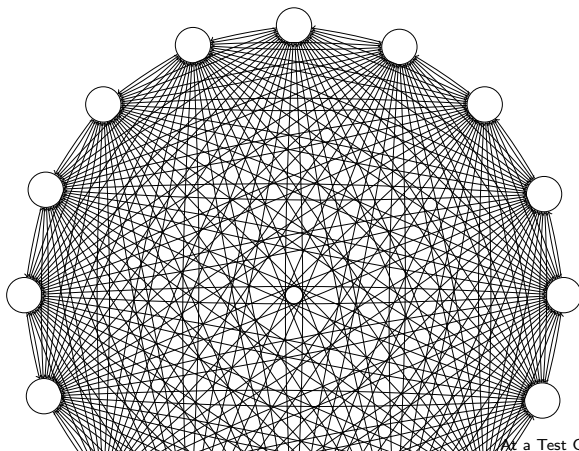
Subslides are another way to achieve pausing without lists. This is a subslide. It always comes after a pause.

- You can also pause within it.
- Of course!

But this is still visible from the outset.

Images, from an external source

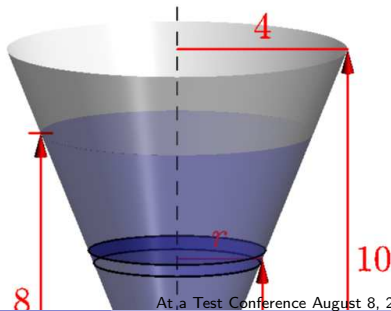
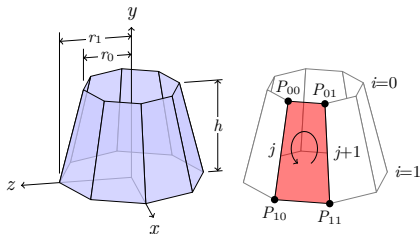
Images can be included from external sources. As with other PreTeXt formats, you can specify the location of your external images in the publication file. The image below also appears in the PreTeXt Sample Article, and originated at www.texample.net.



Images, from source

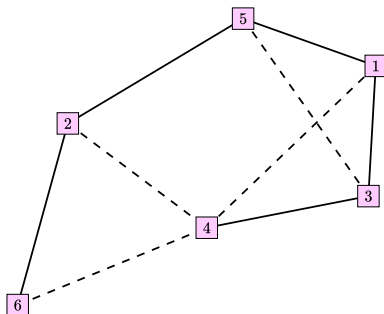
Images can also be generated from source. TikZ works well, and Asymptote. They can be placed in a `<sidebyside>`, and inside a `<figure>` (or both).

Common formatting macros for TikZ and Asymptote (which you expect to use repeatedly) can be placed in `<docinfo>`, using `<latex-image-preamble>` and `<asymptote-preamble>`, respectively. Note that 3D Asymptote images will be rendered in WebGL, and will be interactive within your slide.



Annotated PreFigure diagrams

Annotated PreFigure diagrams also work well by including them in the usual way.



An annotated PreFigure diagram that can be explored with a screenreader

Section 7

Vertical Alignment

Placement by Document Default

The content of this slide is a single short paragraph, and where it sits within the slide is the entire point.

Placement at the Top

The content of this slide is a single short paragraph, and where it sits within the slide is the entire point.

Placement in the Middle

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Placement at the Bottom

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