

Presentations

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How to use the Beamer class

1. Use `beamer` in `\documentclass`, **not** `article`.
2. Create slides with code in a `frame` environment.

Tips for good design

1. Include `\frametitle{title}` in *every* frame.
2. Put `\usetheme{metropolis}` in the preamble.
3. Use `\uncover<n-m>` to reveal content on slides $n-m$.

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The Fundamental Theorem of Algebra

Theorem

Every polynomial $f(x) = a_n x^n + \cdots + a_0$ has a root in \mathbb{C} .

Proof.

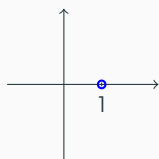
When $r \approx 0$, we see $f(re^{i\theta}) \approx a_0$.

When r is big, we see $f(re^{i\theta}) \approx a_n r^n e^{in\theta}$. (n giant circles)

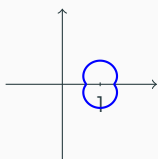
So as r changes from 0 to ∞ , there are values r, θ which make $f(re^{i\theta})$ cross the origin in the complex plane. \square

An example when $f(x) = x^3 - x + 1$

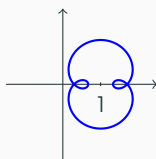
$f(re^{i\theta})$ for $\theta \in [0, 2\pi)$ shown on the complex plane:



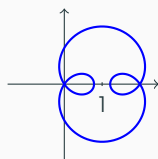
$r = .1$



$r = .5$



$r = .75$



$r \approx 0.868837 \dots$

Common presentation mistakes

- Too much content!
- Lots of text/math on a slide.
- Rapid speech without pauses.
- No images of cute puppies.
- Lots of uncovering (a striptease).



BibTeX can create a bibliography

To print a .bib entry without `\citeing`, use `\nocite`



Beamer manual.

`www.ctan.com/pkg/beamer.`

Accessed February 2017.



Metropolis theme manual.

`www.ctan.org/pkg/beamertheme-metropolis.`

Accessed February 2017.



Theme style and color examples.

`mpetroff.net/files/beamer-theme-matrix.`

Accessed February 2017.