

# Beamer example

Usage of the theme HFU

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## Theorem (Fermat's little theorem)

*For a prime  $p$  and  $a \in \mathbb{Z}$  it holds that  $a^p \equiv a \pmod{p}$ .*

## Proof.

The invertible elements in a field form a group under multiplication. In particular, the elements

$$1, 2, \dots, p - 1 \in \mathbb{Z}_p$$

form a group under multiplication modulo  $p$ . This is a group of order  $p - 1$ . For  $a \in \mathbb{Z}_p$  and  $a \neq 0$  we thus get  $a^{p-1} = 1 \in \mathbb{Z}_p$ . The claim follows. ■

## Example

The function  $\varphi: \mathbb{R} \rightarrow \mathbb{R}$  given by  $\varphi(x) = 2x$  is continuous at the point  $x = \alpha$ , because if  $\epsilon > 0$  and  $x \in \mathbb{R}$  is such that  $|x - \alpha| < \delta = \frac{\epsilon}{2}$ , then

$$|\varphi(x) - \varphi(\alpha)| = 2|x - \alpha| < 2\delta = \epsilon.$$

# Highlighting

# Highlighting

Sometimes it is useful to **highlight** certain words in the text.

## Important message

If a lot of text should be **highlighted**, it is a good idea to put it in a box.

It is easy to match the **colour theme**.

- Bullet lists are marked with a red box.


- 1 Numbered lists are marked with a white number inside a red box.

Description highlights important words with red text.

Items in numbered lists like 1 can be referenced with a red box.

## Example

- Lists change colour after the environment.

 Key messages or conclusions can be highlighted by using an arrow

## 1 Effects that control

Use textblock for arbitrary placement of objects.





- 1 Effects that control
- 2 when text is displayed

Use **textblock** for arbitrary placement of objects.

## Theorem

*This theorem is only visible on slide number 2.*

- 1 Effects that control
- 2 when text is displayed
- 3 are specified with `<>` and a list of slides.

Use **textblock** for arbitrary placement of objects.



- 1 Effects that control
- 2 when text is displayed
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- 1 Effects that control
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Use **textblock** for arbitrary placement of objects.

It creates a box with the specified width (here in a percentage of the slide's width) and upper left corner at the specified coordinate (x, y) (here x is a percentage of width and y a percentage of height).

# Diskussion und Fragen

# References I

-  Hartshorne, R.  
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-  Helsø, M. and Ranestad, K.  
*Rational quartic spectrahedra*, 2018.  
<https://arxiv.org/abs/1810.11235>
- ▶ Atiyah, M. and Macdonald, I.  
*Introduction to commutative algebra*.  
Addison-Wesley Publishing Co., Reading, Mass.-London-Don Mills, Ont., 1969

# References II

- [5] Artin, M.  
'On isolated rational singularities of surfaces'.  
*Amer. J. Math.*, 80(1):129–136, 1966.