

# beamer examples

created with beamer 3.x

Matthias Pospiech

University of Hannover

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# Tutorial

# Contents

- 1** Tutorial: Euclid's Presentation
  - Creating a Simple Frame
  - Creating Simple Overlays
  - Structuring a Frame
  - Verbatim Text

# What Are Prime Numbers?

A prime number is a number that has exactly two divisors.

- ▶ 2 is prime (two divisors: 1 and 2).
- ▶ 3 is prime (two divisors: 1 and 3).
- ▶ 4 is not prime (**three** divisors: 1, 2, and 4).

- ▶ 2 is prime (two divisors: 1 and 2).
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**1** Suppose  $p$  were the largest prime number.

**4** Thus  $q + 1$  is also prime and greater than  $p$ . □

- 1 Suppose  $p$  were the largest prime number.
- 2 Let  $q$  be the product of the first  $p$  numbers.
- 4 Thus  $q + 1$  is also prime and greater than  $p$ . □

- 1 Suppose  $p$  were the largest prime number.
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- 4 Thus  $q + 1$  is also prime and greater than  $p$ . □

The proof used *reductio ad absurdum*.

Is every even number the sum of two primes?

## What's Still To Do?

- ▶ Answered Questions
  - ▶ How many primes are there?
- ▶ Open Questions
  - ▶ Is every even number the sum of two primes?

Is every even number the sum of two primes? [1]

# An Algorithm For Finding Primes Numbers.

```
int main (void)
{
    std::vector<bool> is_prime (100, true);
    for (int i = 2; i < 100; i++)
        if (is_prime[i])
        {
            std::cout << i << " ";
            for (int j = i; j < 100;
                is_prime [j] = false, j+=i);
        }
    return 0;
}
```



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```

Note the use of `std::`.

# Howtos

# Contents

- 2** How To Uncover Things Piecewise
  - Uncovering an Enumeration Piecewise
  - Highlighting the Current Item in an Enumeration
  - Changing Symbol Before an Enumeration
  - Uncovering Piecewise

- First point.

- ▶ First point.
- ▶ Second point.



- ▶ First point.
  - ▶ Second point.
  - ▶ Third point.
- 
- ▶ First point.
  - ▶ Second point.
  - ▶ Third point.

- ▶ First point.
  - ▶ Second point.
  - ▶ Third point.
- 
- ▶ First point.
  - ▶ Second point.
  - ▶ Third point.
- 
- ▶ First point.
  - ▶ Second point.

- ▶ First point.
  - ▶ Second point.
  - ▶ Third point.
- 
- ▶ First point.
  - ▶ Second point.
  - ▶ Third point.
- 
- ▶ First point.
  - ▶ Second point.
  - ▶ Third point.

- First point.

- ▶ First point.
- ▶ Second point.

- ▶ First point.
- ▶ Second point.
- ▶ Third point.

or

- ▶ First point.
- ▶ Second point.
- ▶ Third point.

g a ballot First point.

► First point.

g a ballot Second point.



- ▶ First point.
- ▶ Second point.

g a ballot Third point.

and

- ▶ First point.
- ▶ Second point.

g a ballot Third point.

In the following example, more and more items become "checked" from slide to slide:

g a ballot First point.

- ▶ Second point.
- ▶ Third point.

In the following example, more and more items become "checked" from slide to slide:

g a ballot First point.

g a ballot Second point.

- ▶ Third point.

In the following example, more and more items become "checked" from slide to slide:

g a ballot First point.

g a ballot Second point.

g a ballot Third point.

In the following example, more and more items become "checked" from slide to slide:

g a ballot First point.

g a ballot Second point.

g a ballot Third point.

## Uncovering Tagged Formulas Piecewise

$$A = B \tag{1}$$

$$= C \tag{2}$$

$$= D \tag{3}$$

## Uncovering Tagged Formulas Piecewise

$$A = B \tag{1}$$

$$= C \tag{2}$$

$$= D \tag{3}$$

## Uncovering Tagged Formulas Piecewise

$$A = B \tag{1}$$

$$= C \tag{2}$$

$$= D \tag{3}$$



## Uncovering a Table Rowwise

Class	A	B	C	D
X	1	2	3	4
Y	3	4	5	6
Z	5	6	7	8

## Uncovering a Table Rowwise

Class	A	B	C	D
X	1	2	3	4
Y	3	4	5	6
Z	5	6	7	8

## Uncovering a Table Rowwise

Class	A	B	C	D
X	1	2	3	4
Y	3	4	5	6
Z	5	6	7	8

## Uncovering a Table Columnwise

Class	A	B	C	D
X	1	2	3	4
Y	3	4	5	6
Z	5	6	7	8

## Uncovering a Table Columnwise

Class	A	B	C	D
X	1	2	3	4
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X	1	2	3	4
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# Building a Presentation



# Contents

## 3 Creating Overlays

# Contents

## 3 Creating Overlays

## 4 Structuring a Presentation: The Interactive Global Structure

# Contents

**3** Creating Overlays

**4** Structuring a Presentation: The Interactive Global Structure

**5** Structuring a Presentation: The Local Structure

# Contents

**3** Creating Overlays

**4** Structuring a Presentation: The Interactive Global Structure

**5** Structuring a Presentation: The Local Structure

**6** Animations, Sounds, and Slide Transitions

# Contents

**3** Creating Overlays

**4** Structuring a Presentation: The Interactive Global Structure

**5** Structuring a Presentation: The Local Structure

**6** Animations, Sounds, and Slide Transitions

**7** Adding Notes

- ▶ Shown from first slide on.
- ▶ Shown from second slide on.
  - ▶ Shown from second slide on.
  - ▶ Shown from third slide on.
- ▶ Shown from third slide on.
- ▶ Shown from fourth slide on.

Shown from fourth slide on.

- ▶ Shown from first slide on.
- ▶ Shown from second slide on.
  - ▶ Shown from second slide on.
  - ▶ Shown from third slide on.
- ▶ Shown from third slide on.
- ▶ Shown from fourth slide on.

Shown from fourth slide on.

- ▶ Shown from first slide on.
- ▶ Shown from second slide on.
  - ▶ Shown from second slide on.
  - ▶ Shown from third slide on.
- ▶ Shown from third slide on.
- ▶ Shown from fourth slide on.

Shown from fourth slide on.



- ▶ Shown from first slide on.
- ▶ Shown from second slide on.
  - ▶ Shown from second slide on.
  - ▶ Shown from third slide on.
- ▶ Shown from third slide on.
- ▶ Shown from fourth slide on.

Shown from fourth slide on.

- ▶ Shown from first slide on.
- ▶ Shown from fifth slide on.

- ▶ Shown from first slide on.
- ▶ Shown from second slide on.
  - ▶ Shown from second slide on.
  - ▶ Shown from third slide on.
- ▶ Shown from third slide on.
- ▶ Shown from fourth slide on.

Shown from fourth slide on.

- ▶ Shown from first slide on.
- ▶ Shown from fifth slide on.

**This line is bold on all three slides.** This line is bold only on the second slide. This line is bold only on the third slide.

**This line is bold on all three slides. This line is bold only on the second slide.** This line is bold only on the third slide.

**This line is bold on all three slides.** This line is bold only on the second slide. **This line is bold only on the third slide.**

This line is inserted only on slide 1.

This line is inserted only on slide 2.

Shown on first slide.

- ▶ Still shown on the second and third slide.
- ▶ Shown from slide 4 on.

Shown from slide 4 on.



Shown on first slide. Shown on second and third slide.

- ▶ Still shown on the second and third slide.
- ▶ Shown from slide 4 on.

Shown from slide 4 on.

Shown on first slide. Shown on second and third slide.

- ▶ Still shown on the second and third slide.
- ▶ Shown from slide 4 on.

Shown from slide 4 on.

Shown on first slide.

- ▶ Still shown on the second and third slide.
- ▶ Shown from slide 4 on.

Shown from slide 4 on. Shown on all slides.

Same effect as the following command. Same effect as the previous command.

previous command.

Same effect as the following command. Same effect as the

Same effect as the following command. Same effect

Shown on 1, 2 Shown on 1, 2, 4

Shown on 1, 2 Shown on 1, 2, 4



Shown on 3, 4 Shown on 3, 5

Shown on 3, 4 Shown on 1, 2, 4

Shown 5, 6, 7, ... Shown on 3, 5

- ▶ First item.
- ▶ Second item.
- ▶ Third item.
- ▶ Fourth item.

- ▶ First item.
- ▶ Second item.
- ▶ Third item.
- ▶ Fourth item.

- ▶ First item.
- ▶ Second item.
- ▶ Third item.
- ▶ Fourth item.

- ▶ First item.
- ▶ Second item.
- ▶ Third item.
- ▶ Fourth item.

## 1 The first and main point.



**1** The first and main point.

**2** The second point.

0. A zeroth point, shown at the very end.

1 The first and main point.

2 The second point.



The set of natural numbers is infinite.

The set of natural numbers is infinite.

This line is always shown.

This line is always shown. This line is inserted on slide 2.

This [ word ] is in round brackets on slide 2 and in square brackets on slide 1.



This ( word ) is in round brackets on slide 2 and in square brackets on slide 1.

Some text for the first slide.

Possibly several lines long.

Replacement on the second slide.

Some text for the first slide.

Possibly several lines long.

Replacement on the second slide. Suppressed for handout.

This text is shown the same way as the text below.  
same way as the text above.

This text is shown the same way as the text below. This text is shown the same way as the text above.

This text is shown the same way as the text below. This text is shown the same way as the text above.



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This text is shown the same way as the text below. This text is shown the same way as the text above.

## ► Apple

- ▶ Apple
- ▶ Peach

- ▶ Apple
- ▶ Peach
- ▶ Plum

- ▶ Apple
- ▶ Peach
- ▶ Plum
- ▶ Orange

- ▶ Apple
- ▶ Peach
- ▶ Plum
- ▶ Orange
- ▶ Apple



- ▶ Apple
- ▶ Peach
- ▶ Plum
- ▶ Orange
  
- ▶ Apple
- ▶ Peach

- ▶ Apple
- ▶ Peach
- ▶ Plum
- ▶ Orange
  
- ▶ Apple
- ▶ Peach
- ▶ Plum

- ▶ Apple
- ▶ Peach
- ▶ Plum
- ▶ Orange
  
- ▶ Apple
- ▶ Peach
- ▶ Plum
- ▶ Orange

- ▶ Apple
  - ▶ Peach
  - ▶ Plum
  - ▶ Orange
- 
- ▶ Apple
  - ▶ Peach
  - ▶ Plum
  - ▶ Orange
- 
- ▶ This is **important**.

- ▶ Apple
  - ▶ Peach
  - ▶ Plum
  - ▶ Orange
- 
- ▶ Apple
  - ▶ Peach
  - ▶ Plum
  - ▶ Orange
- 
- ▶ This is important.
  - ▶ We want to highlight this and this.

- ▶ Apple
- ▶ Peach
- ▶ Plum
- ▶ Orange
  
- ▶ Apple
- ▶ Peach
- ▶ Plum
- ▶ Orange
  
- ▶ This is important.
- ▶ We want to highlight this and this.
- ▶ What is the **matrix**?

- First item.

- ▶ First item.
- ▶ Second item.



- ▶ First item.
- ▶ Second item.
- ▶ Third item.

▶ Jump to second slide

- First item.

- ▶ First item.
- ▶ Second item.

- ▶ First item.
- ▶ Second item.
- ▶ Third item.

▶ Jump to second slide

...

► Skip proof



There are three important points:

- 1 A first one,

There are three important points:

- 1** A first one,
- 2** a second one with a bunch of subpoints,
  - ▶ first subpoint. (Only shown from second slide on!).



There are three important points:

- 1** A first one,
- 2** a second one with a bunch of subpoints,
  - ▶ first subpoint. (Only shown from second slide on!).
  - ▶ second subpoint added on third slide.

There are three important points:

- 1** A first one,
- 2** a second one with a bunch of subpoints,
  - ▶ first subpoint. (Only shown from second slide on!).
  - ▶ second subpoint added on third slide.
  - ▶ third subpoint added on fourth slide.

There are three important points:

- 1** A first one,
- 2** a second one with a bunch of subpoints,
  - ▶ first subpoint. (Only shown from second slide on!).
  - ▶ second subpoint added on third slide.
  - ▶ third subpoint added on fourth slide.
- 3** and a third one.

► This is shown from the first slide on.

► This is shown from the first slide on.

- ▶ This is shown from the first slide on.
- ▶ This is shown from the second slide on.
- ▶ This is shown from the first slide on.

- ▶ This is shown from the first slide on.
- ▶ This is shown from the second slide on.
- ▶ This is shown from the third slide on.
- ▶ This is shown from the first slide on.

- ▶ This is shown from the first slide on.
- ▶ This is shown from the second slide on.
- ▶ This is shown from the third slide on.
- ▶ This is shown from the first slide on.
- ▶ This is shown from the fourth slide on.

short Some text.



short Some text.

longest label Some text.

short Some text.

longest label Some text.

long label Some text.

1 = 2.

The set  $\{1, 2, 3, 5\}$  has four elements.





The set of natural numbers is infinite.

$$A = B.$$



Two  
lines.

One line (but aligned).

## Fadeout Frame

Animations only work in full screen mode in Acrobat Reader ! This text (and all other frame content) will fade out when the second slide is shown. This even works with **colored text**.

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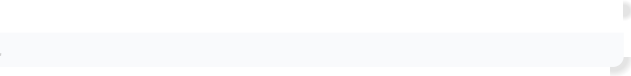
# Fadeout Frame

animations only work in full screen mode in Acrobat Reader !









*in.*



es in.

*flies in.*

*m flies in.*

*orem flies in.*

*eorem flies in.*

*theorem flies in.*

*this theorem flies in.*

*This theorem flies in.*



*This theorem flies in.*

*This theorem flies in.*









This line is shown on each slide of slide transitions











This line is shown on each slide of slide transitions





## ► Eggs

- ▶ Eggs
- ▶ Plants



- ▶ Eggs
- ▶ Plants
- ▶ Animals

beamericonarriage

[Goldbach, 1742] Christian Goldbach.

A problem we should try to solve before the ISPN '43 deadline,

*Letter to Leonhard Euler, 1742.*