

Efficient Local Search for Nonlinear Real Arithmetic

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Outline

1. Problem - Nonlinear Real Arithmetic

2. Beamer Basic

- Highlight
- Other Environments

3. Beamer More

- Split Screen
- Table
- Math

4. Conclusion

Problem - Nonlinear
Real Arithmetic

Beamer Basic

Highlight

Other Environments

Beamer More

Split Screen

Table

Math

Conclusion

Outline

1. Problem - Nonlinear Real Arithmetic

2. Beamer Basic

- Highlight
- Other Environments

3. Beamer More

- Split Screen
- Table
- Math

4. Conclusion

Problem - Nonlinear
Real Arithmetic

Beamer Basic

Highlight

Other Environments

Beamer More

Split Screen

Table

Math

Conclusion

Latex and Beamer

LaTeX is a high-quality typesetting system; it includes features designed for the production of technical and scientific documentation.

Problem - Nonlinear
Real Arithmetic

Beamer Basic

Highlight

Other Environments

Beamer More

Split Screen

Table

Math

Conclusion

Latex and Beamer

LaTeX is a high-quality typesetting system; it includes features designed for the production of technical and scientific documentation.

Beamer is a LaTeX class to create powerful, flexible and nice-looking presentations and slides.

The beamer class is focussed on producing (on-screen) presentations, along with support material such as handouts and speaker notes.

Problem - Nonlinear
Real Arithmetic

Beamer Basic

Highlight

Other Environments

Beamer More

Split Screen

Table

Math

Conclusion

Outline

1. Problem - Nonlinear Real Arithmetic

2. Beamer Basic

- Highlight
- Other Environments

3. Beamer More

- Split Screen
- Table
- Math

4. Conclusion

Problem - Nonlinear
Real Arithmetic

Beamer Basic

Highlight

Other Environments

Beamer More

Split Screen

Table

Math

Conclusion

Block and Alert

Pythagorean theorem

$$a^2 + b^2 = c^2$$

where c represents the length of the hypotenuse and a and b the lengths of the triangle's other two sides.

Remark

- the environment above is **block**
- the environment here is **alertblock**

Problem - Nonlinear
Real Arithmetic

Beamer Basic

Highlight

Other Environments

Beamer More

Split Screen

Table

Math

Conclusion

Proof

Pythagorean theorem

$$a^2 + b^2 = c^2$$

Proof.

$$3^2 + 4^2 = 5^2$$

$$5^2 + 12^2 = 13^2$$



Problem - Nonlinear
Real Arithmetic

Beamer Basic

Hightlight

Other Environments

Beamer More

Split Screen

Table

Math

Conclusion

Algorithm

Data: this text

Result: how to write algorithm with $\text{\LaTeX}2\text{e}$ initialization;

while *not at end of this document* **do**

 read current;

if *understand* **then**

 go to next section;

 current section becomes this one;

else

 go back to the beginning of current section;

end

end

Algorithm 1: How to write algorithms (copied from [here](#))

Problem - Nonlinear
Real Arithmetic

Beamer Basic

Highlight

Other Environments

Beamer More

Split Screen

Table

Math

Conclusion

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;
}
```

Note the use of `\alert`.

Problem - Nonlinear
Real Arithmetic

Beamer Basic

Highlight

Other Environments

Beamer More

Split Screen

Table

Math

Conclusion

More

More environments such as

- Definition
- lemma
- corollary
- example

Problem - Nonlinear
Real Arithmetic

Beamer Basic

Hightlight

Other Environments

Beamer More

Split Screen

Table

Math

Conclusion

Outline

1. Problem - Nonlinear Real Arithmetic

2. Beamer Basic

- Highlight
- Other Environments

3. Beamer More

- Split Screen
- Table
- Math

4. Conclusion

Problem - Nonlinear
Real Arithmetic

Beamer Basic

Highlight

Other Environments

Beamer More

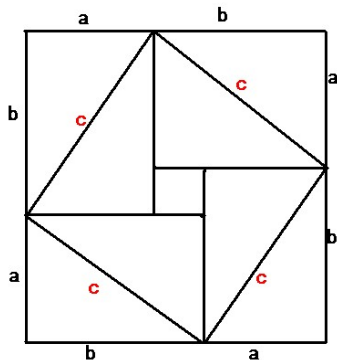
Split Screen

Table

Math

Conclusion

Minipage



- 1 item
- 2 another
- 3 more
 - first
 - second
 - third

Problem - Nonlinear
Real Arithmetic

Beamer Basic

Hightlight

Other Environments

Beamer More

Split Screen

Table

Math

Conclusion

Columns

This is a text in first column.

$$E = mc^2$$

- First item
- Second item

first block

columns achieves splitting the screen

second block

stack block in columns

Problem - Nonlinear
Real Arithmetic

Beamer Basic

Highlight

Other Environments

Beamer More

Split Screen

Table

Math

Conclusion

Create Tables

first	second	third
1	2	3
4	5	6
7	8	9

Problem - Nonlinear
Real Arithmetic

Beamer Basic

Hightlight

Other Environments

Beamer More

Split Screen

Table

Math

Conclusion

Equation1

A matrix in text must be set smaller: $\begin{pmatrix} a & b \\ c & d \end{pmatrix}$ to not increase leading in a portion of text.

$$f(n) = \begin{cases} n/2 & \text{if } n \text{ is even} \\ -(n+1)/2 & \text{if } n \text{ is odd} \end{cases}$$

$$50apples \times 100apples = lotsofapples^2$$

Problem - Nonlinear
Real Arithmetic

Beamer Basic

Highlight

Other Environments

Beamer More

Split Screen

Table

Math

Conclusion

Equation2

$$\sum_{\substack{0 < i < m \\ 0 < j < n}} P(i, j) = \int_a^b \prod P(i, j)$$

$$P\left(A = 2 \left| \frac{A^2}{B} > 4 \right.\right)$$

$$(a), [b], \{c\}, |d|, \|e\|, \langle f \rangle, \lfloor g \rfloor, \lceil h \rceil, \lceil i \rceil$$

Problem - Nonlinear
Real Arithmetic

Beamer Basic

Hightlight

Other Environments

Beamer More

Split Screen

Table

Math

Conclusion

Equation3

$$Q(\alpha) = \alpha_i \alpha_j y_i y_j (x_i \cdot x_j)$$

$$Q(\alpha) = \alpha^i \alpha^j y^{(i)} y^{(j)} (x^i \cdot x^j)$$

$$\Gamma = \beta + \alpha + \gamma + \rho$$

Problem - Nonlinear
Real Arithmetic

Beamer Basic

Hightlight

Other Environments

Beamer More

Split Screen

Table

Math

Conclusion

Outline

1. Problem - Nonlinear Real Arithmetic

2. Beamer Basic

- Highlight
- Other Environments

3. Beamer More

- Split Screen
- Table
- Math

4. Conclusion

Problem - Nonlinear
Real Arithmetic

Beamer Basic

Highlight

Other Environments

Beamer More

Split Screen

Table

Math

Conclusion

End

The last page.

Problem - Nonlinear
Real Arithmetic

Beamer Basic

Hightlight

Other Environments

Beamer More

Split Screen

Table

Math

Conclusion