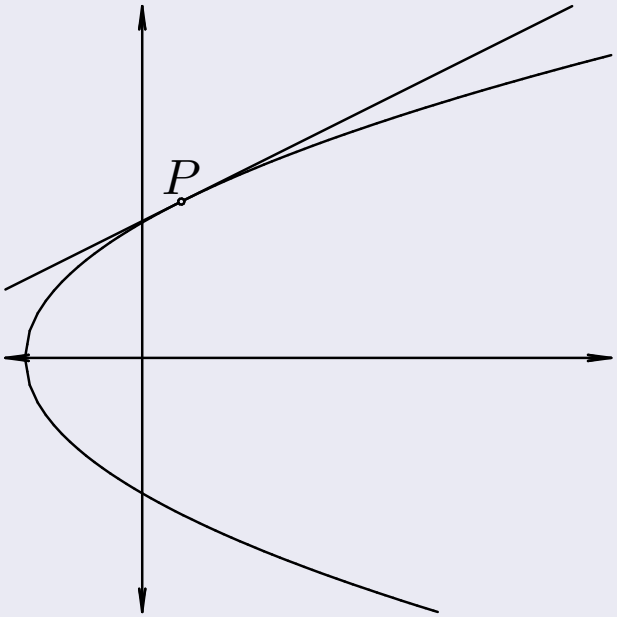
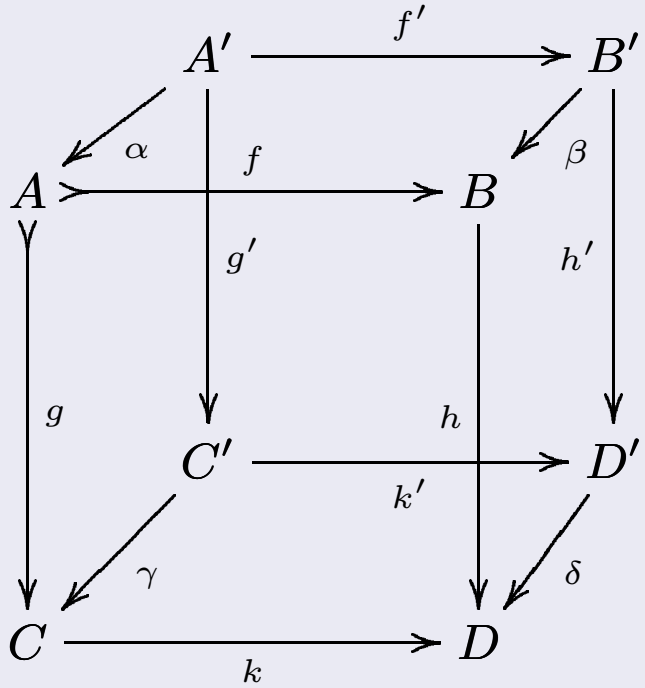
HOW WAS I MADE?



Conic courtesy of WinGCLC



Michael Barr's diagxy package

An introduction to presentations that

$e^{i\pi} = -1$ so you can have your π and e it too!

Made by Steve Mayer

An introduction to presentations that

- are mathematically friendly

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An introduction to presentations that

- are mathematically friendly
- give typeset quality output

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An introduction to presentations that

- are mathematically friendly
- give typeset quality output
- use software that is free and works on every operating system

$e^{i\pi} = -1$ so you can have your π and e it too!

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How it all started

1. In the 1970s Donald Knuth got ~~p****d off~~ fed up

Amazing fact 1:
$(\pi^4 + \pi^5)^{\frac{1}{6}} \approx e$

Ooh! Numbered bullets

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LaTeXed mathematics

Why do people use silly transitions?

LaTeXed mathematics

Using brackets is fine, until there are so many brackets it is difficult for students to understand them, such as
(4x-1)(((2x+1)/(1+x^(2n)))^2)
(to say nothing of the difficulty of typing this correctly and unambiguously), whereas the mathematical equivalents

$$\int_0^1 \frac{x^4\,(1-x)^4}{1+x^2}\,dx \text{ and } (4x-1)\left(\frac{2x+1}{1+x^{2n}}\right)^2$$

are so much clearer, which is of course the point of the notation.

Note the ligatures

This presentation uses seriffed fonts though would normally be sans seriffed

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Yuk!

Those were pictures but we can also present the text

At last some mathematics!

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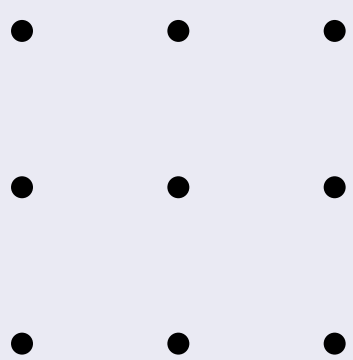
The text is taken from *Two LaTeX-to-Web Tools* - Eutupon (*Ευτυπον*) TeX Journal, October 2005

At last some mathematics!

Puzzle

Connect the dots by using 4 lines, without taking your pen off the paper and only going through each dot once



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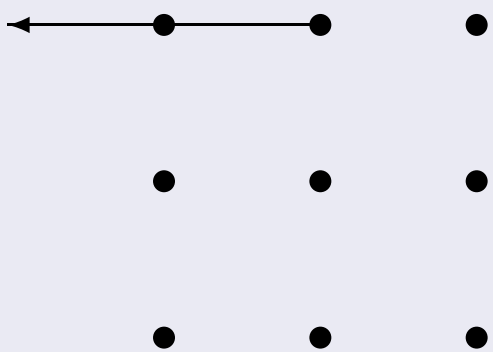

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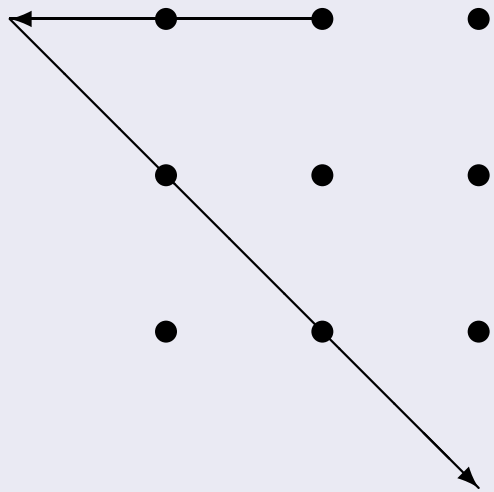

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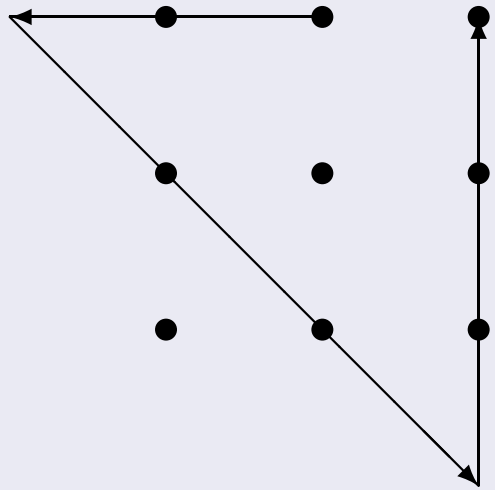

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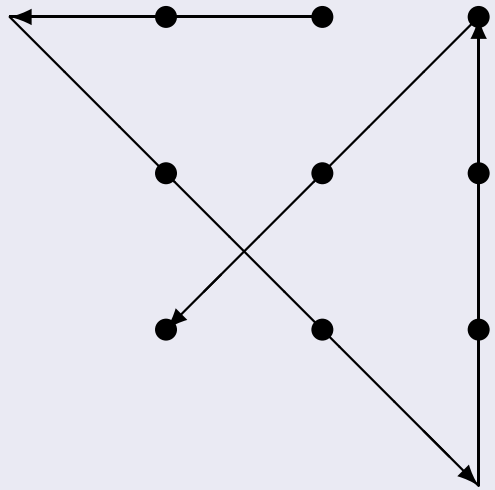
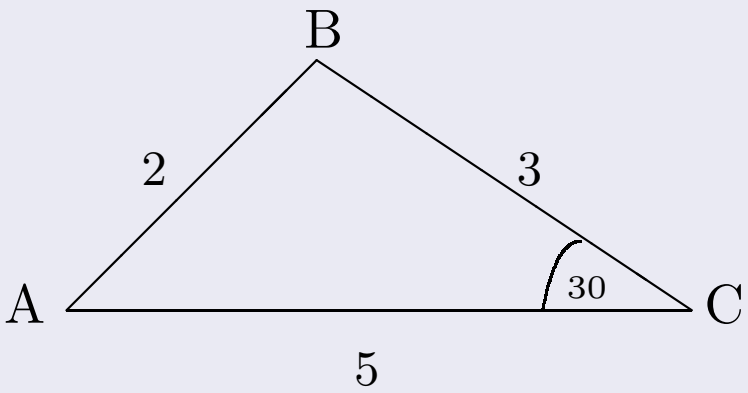


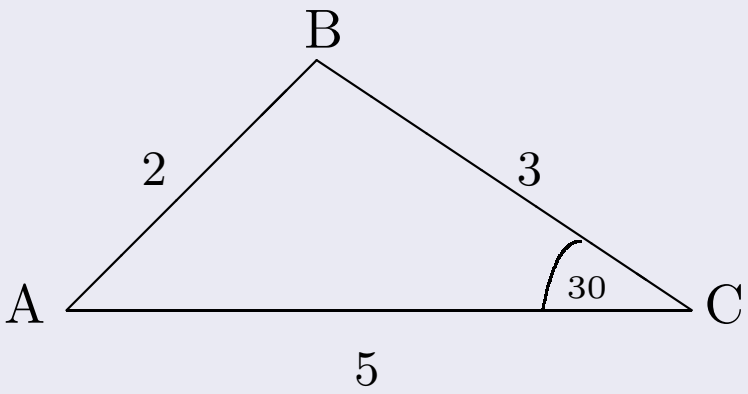
Obvious really!

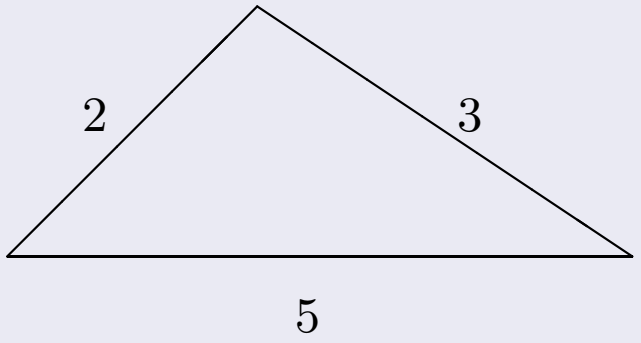
A FALSE picture



triangle

A FALSE picture





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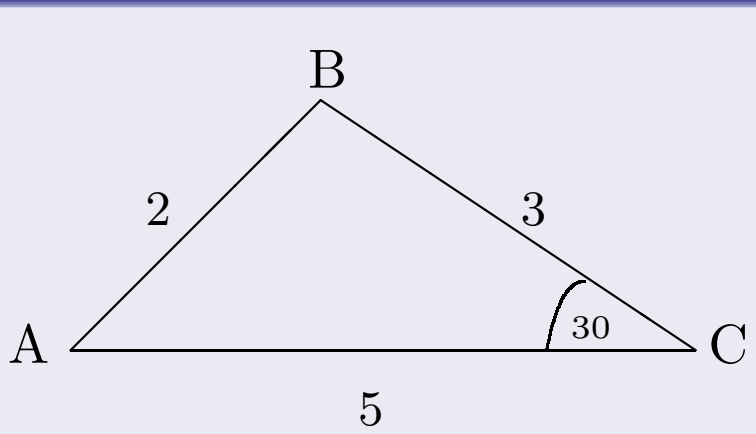

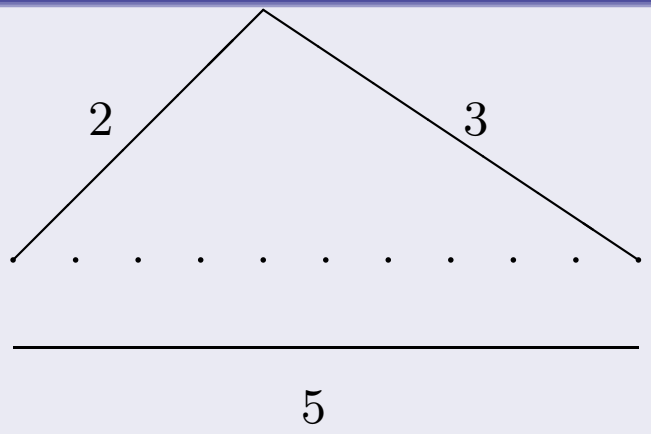

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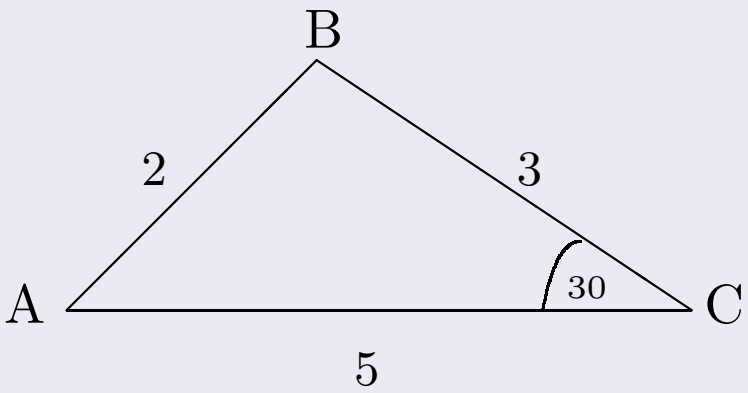

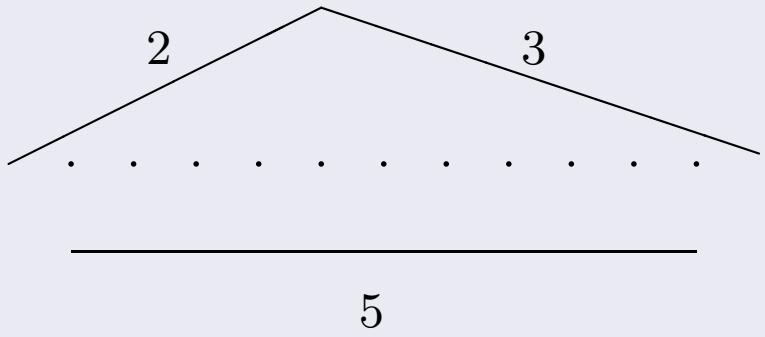

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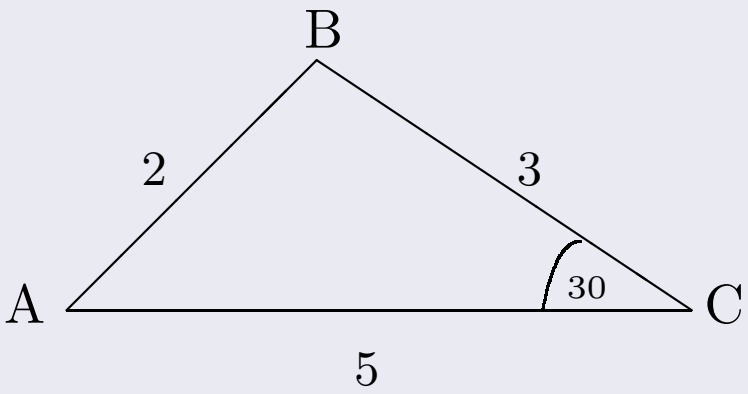

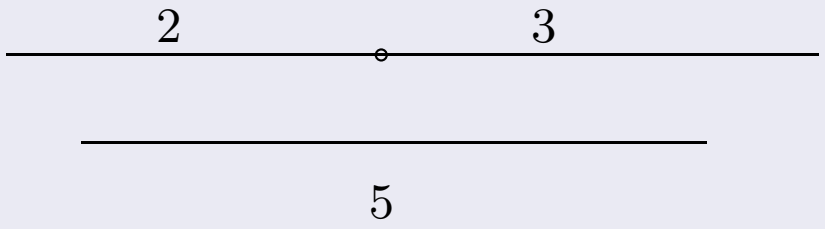

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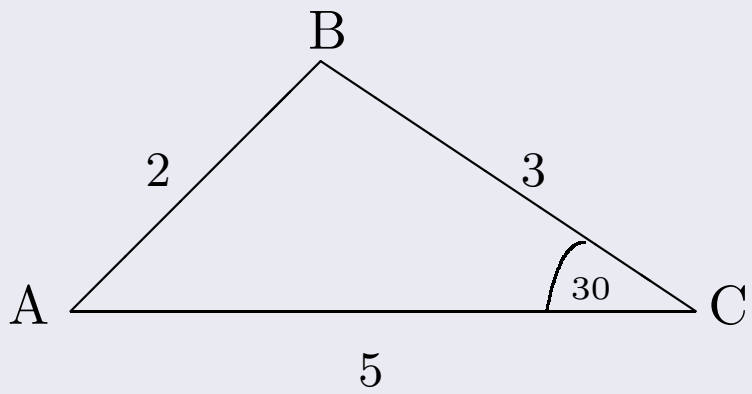

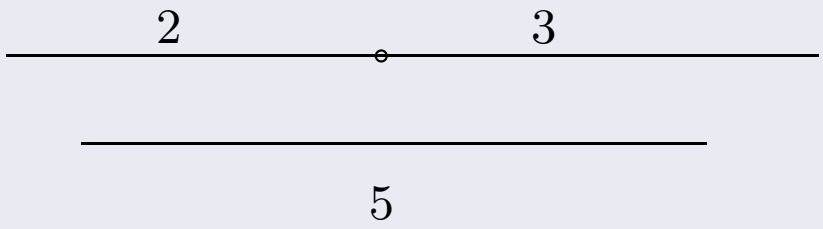

Chemistry!

$$\mathrm{Zn^{2+}} \underset{+2\,\mathrm{H^+}}{\overset{+2\,\mathrm{OH^-}}{\rightleftharpoons}} \underset{\text{amphoteric Hydroxid}}{\mathrm{Zn(OH)_2\downarrow}} \underset{+2\,\mathrm{H^+}}{\overset{+2\,\mathrm{OH^-}}{\rightleftharpoons}} \underset{\text{Hydroxozikat}}{\mathrm{[Zn(OH)_4]^{2-}}}$$

No footnote here

Answer the question!

Amazing fact 2:
$e^{\pi} - \pi^{e} \approx$
$1 - \Phi = \frac{1-\sqrt{5}}{2}$

Only a mathematician takes this long to get to the point

Answer the question!

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  LaTeX and its helpers called packages

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Start with text (only about 16 KB)

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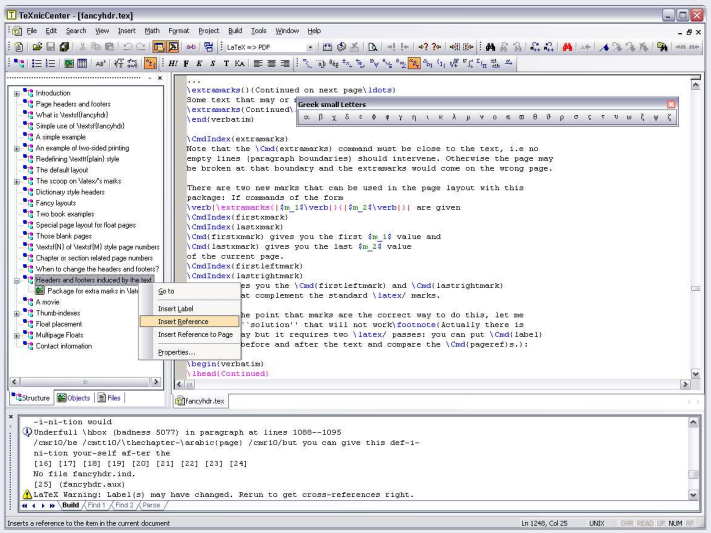

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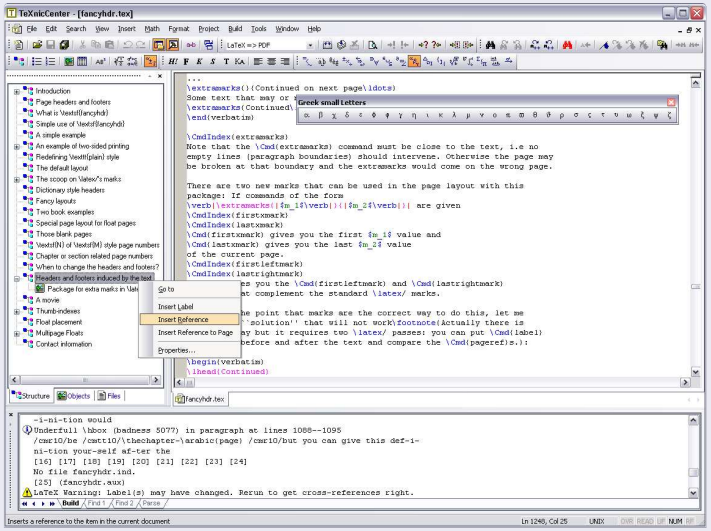
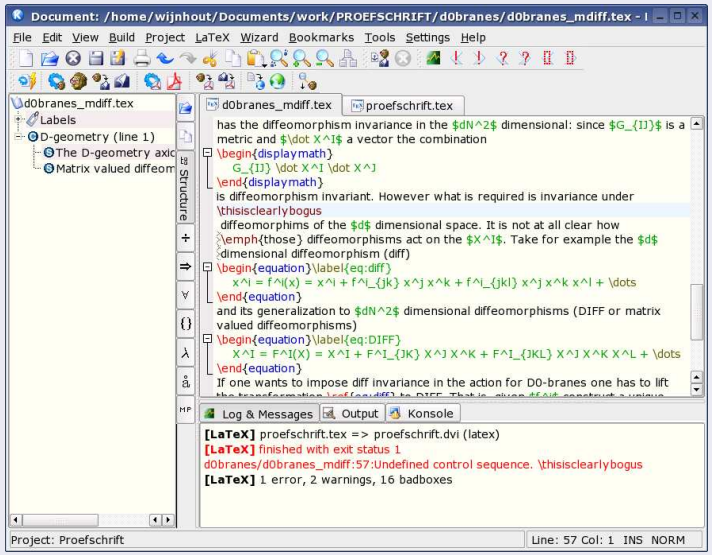


and Kile (Linux)



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Mathematicians find this delightful:

$$\int_0^1 \frac{x^4 (1-x)^4}{1+x^2}\, dx = \frac{22}{7} - \pi$$

Yippee - footnotes are back!

Answer the question!

- The text file is then compiled by LaTeX

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- An example: $\sqrt[3]{5}$ That's better

$\sqrt[3]{5} = 1.709975946676696989353108872543 9\ldots$

Disadvantages and Advantages

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  makes it all worthwhile!

That's all folks!