Nucler Fusion Physics and Technology Wikibook

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Chapter 1

How to contribute

Who can contribute

There are two ways anyone can contribute:

1. help us create appropriate design (css, templates, etc.)
2. help us improve text itself

The first item can be done by everyone with wiki-style knowledges. The second one requires professional knowledge about the topic. If you are the case, feel free to help us. Please, respect further rules.

Wikibook design

The book should be displayed in some simple design. Since I am new in wikibooks, I will appreciate any help in this matter.

Wikibook scheme

This wikibook should be written in definition-theorem-proof scheme, which I will discuss now. The scheme is well-known to all mathematicians, physicists, etc. For others I will explain it in following rules:

1. "Definition" are sentences precisely explaining new term. First appearance of the term is always written in italic style (in sentences). The header of the definition consists of bold words Definition: term.
2. "Proof" is set of mathematical instructions started by underlined "Proof:" and ended by "Q.E.D." strings and with no header. Those instructions should start with given pre-requisitions and imply an relationship between already defined terms.

3. "Theorem" are sentences precisely explaining relationship between already defined terms. The header of the theorem consists of bold word Theorem. Theorem is always followed either by underlined sentence "Without proof." or by Proof.

4. "Note" are sentences started by bold "Note" header and explaining an idea of near definitions or theorems to reader in non-exact way (usually in analogies or on examples). In the end there should be no notes after all, but students or newcomers may appreciate it after all.

5. "subpart" is a definition, theorem, proof or note.

6. the wikibook is ordered set of subparts (as wikibook policies says too) (each subpart has a unique integer and book is sorted set of the subparts)

An Example page shows the mentioned style.

Copyright problems

Honestly, its quite a law mess in exact sciences. Is a well-known definition or theorem under copyright or not? What if the definition or theorem is already published somewhere? This questions has to be answered every time when a new subpart is added. Please feel free to discuss this matter at proper place (near the subpart).

Chapter 2

Algebra summary

Definition: Kartesian multiplication

Kartesian multiplication of two sets A, B with |a>,|b> elements is defined as

$$A \times B = \{(|a>, |b>) : |a> \in A \wedge |b> \in B\}$$

Definition: Projection

Projection f from set A to set B is AxB subset defined as
$f = \{(|a>, |b>) \in A \times B : \forall |a> \in A \exists_1 |b> \in B\}$
and notation $f(|a>) = |b>$ is used.

Definition: Body of numbers

Body of numbers T is defined as

$$T = \{c \in \mathbb{C} : (\exists c_1, c_2)(c_1 \neq c_2) \wedge (\forall c_1, c_2)(\exists c_3 = c_1 + c_2 \wedge \exists c_4 = c_1.c_2 \wedge \exists c_5 = -c_1 \wedge \exists 0 \neq c_6 = c_1^{-1})\}$$

Definition: Vector space

Vector space V is defined as

$$V = \{(V, T, f_1, f_2) : (\forall |a>, |b> \in V)(f_1(|a>, |b>) = f_1(|b>, |a>))(...)\}$$

Chapter 3

Calculus summary

Chapter 4

Statistics

Chapter 5

Mathematical Physics summary

Chapter 6

Particle Physics summary

Chapter 7

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Appendix A

Document Information & History

History

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Authors

Lukáš Sedlák, Pi zero, QuiteUnusual, and anonymous contributors.