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# Title of the Article, Broken into Lines

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(Submitted by A. A. Editor-name)

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**Abstract**—In this example, the article contains some required author information and examples of how to gain an article in the REVTeX 4 for Lobachevskii Journal of Mathematics. You shouldn't use formulas and citations in the abstract.

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Keywords and phrases: *Keyword1, Keyword2*

## 1. INTRODUCTION

To prepare your manuscript, use REVTeX package. The latest version can be downloaded at the project homepage [1]. The process of processing an article using REVTeX is described in detail in the package manuals [2]. Great help in resolving technical issues on TeX can be found in books [3–6]. Use the “House Style Guide: Version 2.0” [7] for more help on how to format article.

## 2. FIRST LEVEL HEADING BROKEN INTO LINES

There are three levels of Headings that are set by the commands `\section`, `\subsection`, and `\subsubsection` (Chapter, subchapter, subsection). Split header into lines is done with the command `\protect\\`. Second level heading as the title of article is written in accordance with the rules of capitalization [8].

### 2.1. Second Level Heading

References in the text are by using the commands `\cite{#1}` or `\onlinecite{#1}`. Label #1 can have a name consisting of both letters and numbers. In the bibliography section<sup>1</sup> this link also has a label #1 and starts the command `\bibitem{#1}`.

With the command `\cite{texbook}` get a reference [3], if you need to refer to several sources: [3, 4], the curly brackets indicate references separated by commas: `\cite{texbook,L}`. When use the command `\onlinecite{#1}` link will not be in brackets: see 3, p. 8. If there is a link to the sources with serial numbers, e.g. [1,2,3,6,7,8], then print automatically following links will take [1–3,6–8].

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<sup>1</sup> See the end of the article.

## 3. STANDALONE FORMULAE

## 3.1. Another second-level heading

In  $\LaTeX$ , there are many ways to embed standalone formulas on the page and align them. By default, formulas always centered.

**3.1.1. One-line formulas** Below are examples of one-line equations:

$$\chi_+(p) \lesssim [2|\mathbf{p}|(|\mathbf{p}| + p_z)]^{-1/2} \begin{pmatrix} |\mathbf{p}| + p_z \\ px + ip_y \end{pmatrix}, \quad (1)$$

$$\left\{ \mathbb{1}234567890abc123\alpha\beta\gamma\delta1234556\alpha\beta \frac{1\sum_b^a}{A^2} \right\}. \quad (2)$$

The second formula has the number (2), which is set by command `\label{one}`. The first formula is assigned a number (1), but it cannot be applied with the help of automatic links, as it has no label.

If the formula number is not necessary, use the environment `\[, \]`, (or `\$...\$`) which obtained the following formula:

$$g^+g^+ \rightarrow g^+g^+g^+g^+ \dots, \quad q^+q^+ \rightarrow q^+g^+g^+ \dots$$

**3.1.2. Multiline formulae** Multiline formulas are typed using the environment `eqnarray`:

$$\begin{aligned} \mathcal{M} = & \quad ig_Z^2(4E_1E_2)^{1/2}(l_i^2)^{-1}\delta_{\sigma_1,-\sigma_2}(g_{\sigma_2}^e)^2\chi_{-\sigma_2}(p_2) \\ & \times [\epsilon_j l_i \epsilon_i]_{\sigma_1} \chi_{\sigma_1}(p_1), \end{aligned} \quad (3)$$

$$\begin{aligned} \sum |M_g^{\text{viol}}|^2 = & \quad g_S^{2n-4}(Q^2) N^{n-2}(N^2 - 1) \\ & \times \left( \sum_{i<j} \right) \sum_{\text{perm}} \frac{1}{S_{12}} \frac{1}{S_{12}} \sum_{\tau} c_{\tau}^f. \end{aligned} \quad (4)$$

If the formula number is not necessary, then at the end of the row in front of the sign `\` you need to put the command `\nonumber`. Never use one line command `\nonumber` and `\label{#1}`, as this may cause error in automatic the numbering of references.

If you want to gain a few formulas without number, use the `eqnarray` environment\* (the asterisk means the abolition numbering):

$$\begin{aligned} \sum |M_g^{\text{viol}}|^2 = & \quad g_S^{2n-4}(Q^2) N^{n-2}(N^2 - 1) \\ & \times \left( \sum_{i<j} \right) \left( \sum_{\text{perm}} \frac{1}{S_{12}S_{23}S_{n1}} \right) \frac{1}{S_{12}}. \end{aligned}$$

To add numbers to the formula manually, use the command `\tag{#1}`, where `#1` — the desired equation number. Here how is the formula with the number of (2.6'):

$$g^+g^+ \rightarrow g^+g^+g^+g^+ \dots, \quad q^+q^+ \rightarrow q^+g^+g^+ \dots \quad (2.6')$$

When you enable single-line and multi-line formulas are surrounded by subequations, each formula "numbered" with a letter, as shown in equations (5a) and (5b):

$$\left\{ abc123456abcdef\alpha\beta\gamma\delta1234556\alpha\beta \frac{1\sum_b^a}{A^2} \right\}, \quad (5a)$$

$$\begin{aligned} \mathcal{M} = & \quad ig_Z^2(4E_1E_2)^{1/2}(l_i^2)^{-1}(g_{\sigma_2}^e)^2\chi_{-\sigma_2}(p_2) \\ & \times [\epsilon_i]_{\sigma_1} \chi_{\sigma_1}(p_1). \end{aligned} \quad (5b)$$

If you put the label right after the `\begin{subequations}`, it can be used further as a reference to all the equations in this environment. For example, you can refer to equation (5) this example.

To set multi-line formulas you can use the environment `multline`, `gather` and `align`. The `multline` environment is good to use for a set of standalone long formulas that do not fit on one line:

$$\begin{aligned} \int_{a_1}^{a_2} f(x) dx + \int_{a_2}^{a_3} f(x) dx + \cdots + \int_{a_{n-1}}^{a_n} f(x) dx \\ + \int_{a_1}^{a_2} g(x) dx + \int_{a_2}^{a_3} g(x) dx + \cdots + \int_{a_{n-1}}^{a_n} g(x) dx \\ + \int_{a_1}^{a_2} h(x) dx + \int_{a_2}^{a_3} h(x) dx + \cdots + \int_{a_{n-1}}^{a_n} h(x) dx \\ = \int_{a_1}^{a_n} f(x) + g(x) + h(x) dx. \end{aligned} \quad (6)$$

This formula is automatically numbered, if the formula number is not need, you have to use the environment `multline*`.

Environment `gather` centers included in the formula:

$$\int_{a_1}^{a_2} f(x) dx + \int_{a_2}^{a_3} f(x) dx + \cdots + \int_{a_{n-1}}^{a_n} f(x) dx \quad (7)$$

$$\begin{aligned} + \int_{a_1}^{a_2} g(x) dx + \int_{a_2}^{a_3} g(x) dx + \cdots + \int_{a_{n-1}}^{a_n} g(x) dx \\ + \int_{a_1}^{a_2} h(x) dx + \int_{a_2}^{a_3} h(x) dx + \cdots + \int_{a_{n-1}}^{a_n} h(x) dx \end{aligned} \quad (8)$$

$$= \int_{a_1}^{a_n} f(x) + g(x) + h(x) dx. \quad (9)$$

Each line is automatically numbered, if the line number it is not necessary, before `\\` in this line, you need to put the command `\notag`. When you use the environment `gather*` formula will not be numbered.

The `align` environment allows you to align formulas on your discretion:

$$\begin{aligned} \int_{a_1}^{a_2} f(x) dx + \int_{a_2}^{a_3} f(x) dx + \cdots + \int_{a_{n-1}}^{a_n} f(x) dx \\ + \int_{a_1}^{a_2} g(x) dx + \int_{a_2}^{a_3} g(x) dx + \cdots + \int_{a_{n-1}}^{a_n} g(x) dx \end{aligned} \quad (10)$$

$$\begin{aligned} + \int_{a_1}^{a_2} h(x) dx + \int_{a_2}^{a_3} h(x) dx + \cdots + \int_{a_{n-1}}^{a_n} h(x) dx \\ = \int_{a_1}^{a_n} f(x) + g(x) + h(x) dx. \end{aligned} \quad (11)$$

Read more about working with these environments can be found in the book [5].

#### 4. VARIABLES

For the writing of definitions, theorems, lemmas and their proofs use the following variables. If necessary, you can add your variables in the sample.

**Definition 1.** *Define ...*

**Lemma 1.** *If ...*

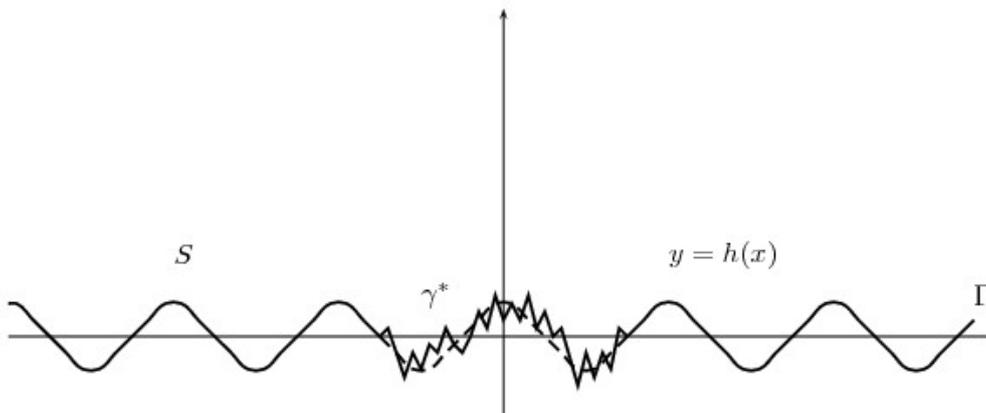
**Theorem 1.** *Let ...*

*Proof.* Consider... □

## 5. FIGURES AND TABLES

REVTeX 4 will automatically number sections, equations, tables, and drawings. Figure captions are made after the image and the signature tables — before a table, as shown in the examples at the end. In tables footnotes<sup>2</sup> not working.

Graphics and diagrams should be monochrome in black-and-white color and saved in EPS format.



**Figure 1.** Please write your figure caption here.

**Table 1.** For the insertion of tables, the table environment is used, the signatures to the tables are made in the same way as the captions for the figures. This is an example of a table whose multi-line name is decorated with the **caption2** package.

	$r_c$ (Å)	$r_0$ (Å)	$\kappa r_0$		$r_c$ (Å)	$r_0$ (Å)	$\kappa r_0$
Cu	0.800	14.10	2.550	Sn	0.680	1.870	3.700
Ag	0.990	15.90	2.710	Pb	0.450	1.930	3.760
Au	1.150	15.90	2.710	Ca	0.750	2.170	3.560
Mg	0.490	17.60	3.200	Sr	0.900	2.370	3.720
Zn	0.300	15.20	2.970	Li	0.380	1.730	2.830
Cd	0.530	17.10	3.160	Na	0.760	2.110	3.120
Hg	0.550	17.80	3.220	K	1.120	2.620	3.480
Al	0.230	15.80	3.240	Rb	1.330	2.800	3.590
Ga	0.310	16.70	3.330	Cs	1.420	3.030	3.740
In	0.460	18.40	3.500	Ba	0.960	2.460	3.780
Tl	0.480	18.90	3.550				

## 6. BIBLIOGRAPHY

The following rules apply for references to books:

<sup>2</sup> Footnotes in tables, you can try to do this manually.

**Table 2.** The name of this table is — one-line.

	1	2	3	4	5	6
1	1	2	3	4	5	6
2	2	4	6	8	10	12
3	3	6	9	12	15	18

- Author’s initials go before the surname with a space between the initials. Use and between the last two authors. All authors listed in the original reference should be cited.
- The title of the book is written in italics. If the book is originally published in Russian, only the English translation of the title is cited and after citation the original language may be indicated in square brackets, e.g.: [in Russian].
- Examples of bibliographic references can be found at the end of this page (i.e. article [9], PhD thesis [10]).

**Acknowledgments.** At the end of the articles are written thanks.

For example:

We thank A. A. Surname1 and B. B. Surname2 for their participation in discussions of the results.

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Links to grants are also listed here.

## Appendix A: APPLICATIONS

To switch to the tab application, you need to use the command `\appendix`. After all the sections will be referred to the word The application and the corresponding letter in the command `\section` you don’t specify, then the application will have names.

## Appendix B

The application may contain subchapters and subsections.

## REFERENCES

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