

# Lithuanian Mathematics Textbooks by President Antanas Smetona

Juozas Banionis

Vytautas Magnus University, Kaunas, Lithuania

Email: juozas.banionis@vdu.lt

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## Abstract

The Seimas (Parliament of the Republic of Lithuania) proclaimed 2019 the year of President Antanas Smetona. In this article, the author returns to the mathematical activities of A. Smetona, future President of the Republic of Lithuania, supplementing his presentation delivered in Lithuania in 2017 with new sources, and aims to familiarise readers with this exceptional personality in English. The article discusses circumstances under which arithmetic and algebra textbooks were written by A. Smetona in 1915, a member of the Textbook Publishing Commission under the Lithuanian Science Society. The main features of publications for developing Lithuanian gymnasiums of that time and their importance in the history of Lithuanian education.

## Keywords

Lithuanian Textbooks, Theory of Arithmetic, Theory of Algebra, Lithuanian Terminology of Mathematics, Senior School (Gymnasium)

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## 1. Introduction

Antanas Smetona (1874-1944)<sup>1</sup>, the future President of the Republic of Lithuania, who obtained the diploma of a lawyer in Saint Petersburg University in 1902, was a man of science and possessed the talent of a teacher. Before his studies,

<sup>1</sup>Antanas Smetona (1874-1944), Chairman of the Council of Lithuania (1917-1918, 1919), President of the Republic of Lithuania (1919-1920, 1926-1931-1938-1940), Associate Professor of University of Lithuania (1922), Honorary Doctor of Vytautas Magnus University (1932). After the USSR presented an ultimatum to Lithuania in June of 1940, A. Smetona proposed armed resistance against the Soviets but the majority of participants of the meeting of State Defence Council did not express their support to the proposal. Protesting against the violence of the Soviets, the President fled to Germany and, thus, impeded the plans of the People's Commissariat for Internal Affairs to use him and successfully turn Lithuania into a bolshevik country. A. Smetona, who settled in the USA and became the President of the Republic of Lithuania in emigration, had expectations to serve the purpose of the Lithuania's freedom but unexpectedly died in a fire in 1944.

still learning in Palanga Pro-Gymnasium (1891-1893), Mitau (currently, Jelgava, Latvia) Gymnasium (1893-1896) and Saint Petersburg Vvedensky Gymnasium (No. 9) (1896-1897) (Russian..., 1897: pp. 6-7), he successfully delivered private lessons. Having returned to Vilnius, the young lawyer immediately got involved into the matters of Lithuanian national revival and started actively expressing himself in broad public and educative activities. From the very establishment of *Lithuanian Science Society* (LSS) in 1907, A. Smetona became a member of the Council of the Assembly, engaged in setting up the Assembly's library and earned the honourable nickname of "the lover of books". One of the most significant achievements of LSS includes preparation and publishing of Lithuanian textbooks for secondary schools. Specially established *Textbook Publishing Commission* (TPC) was occupied with publishing, where he, as one of the members and establishers of Lithuanian Science Society, worked very efficiently (Figure 1).

Considerable merits of A. Smetona have to be properly attributed to development of education in Lithuania. Thus, he left well-marked traces not only in school textbooks publishing but also establishing senior Lithuanian schools (progymnasiums, gymnasiums). His interest in the creation of the national Lithuanian school did not decline after A. Smetona became the president of the state. As contemporaries of the president recall, the pedagogical journal "Tautos mokykla" (The School of the Nation) was always on his desk among the newest most relevant subscribed publications (Prezidento..., 2017: p. 86). On 22 August 1919, he signed Provisional Statute of Higher General Education Schools of the Ministry of Education, which provided for the framework of the national education

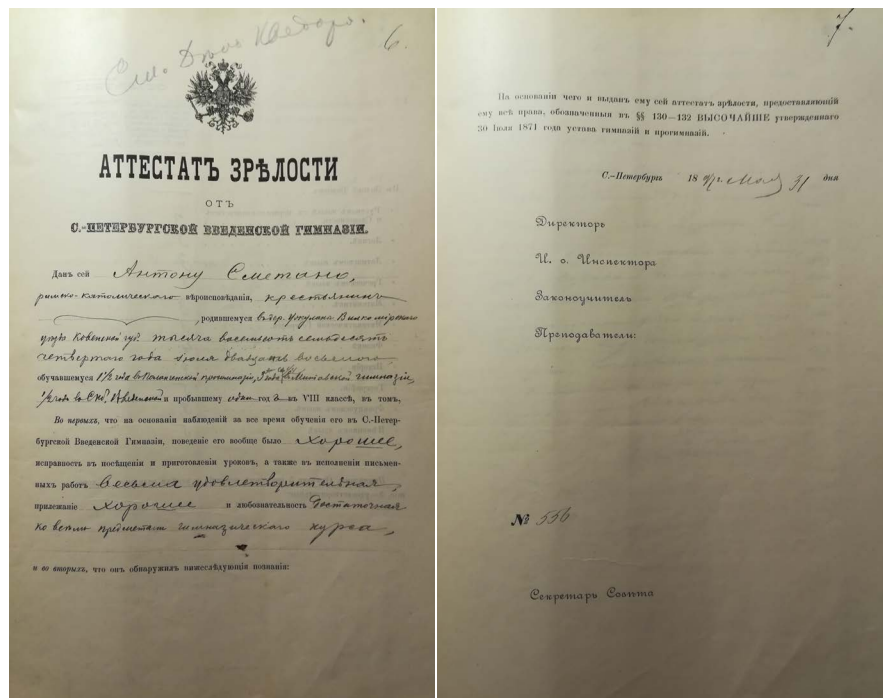


Figure 1. Maturity certificate issued by A. Smetona in St. Petersburg in 1897.

system. With his knowledge, the Law on Secondary Schools entered into force on 1 September 1936. Finally, it was not a coincidence that following that act, as the President of the Republic of Lithuania, the Pedagogical Institute, that is, “the school of the school” was founded on 18 September 1935, which gave the beginning to Vilnius Pedagogical University (2011-2018 Lithuanian University of Educational Sciences) (Figure 2).

Thus, A. Smetona made substantial contributions to both creating Lithuanian schools in the beginning of the 20th century and preparing school textbooks. However, reviewing Lithuanian textbooks of mathematics in historiography of Lithuanian science such facts were ignored for a long period of time, whereas now, discussing textbooks of that time, only the reference is made to the surname of A. Smetona. In their monographs on A. Smetona as a statesman and political, cultural and public figure, Kazys Binkis, Izidorius Kisinis, Aleksandras Merkelis, Liudas Truska mentioned his merits to publishing of mathematics textbooks. Historian Alfonsas Eidintas gave a slightly broader description of his activities in this field (Binkis, 1934; Kisinis, 1935; Merkelis, 1938; Truska, 1996; Eidintas, 1990, 2012, 2015). Pranas Janulevičius presented activities of A. Smetona developing Lithuanian schools in a more detailed way (Janulevičius, 1934). Moreover, Algirdas Ažubalis emphasised his deeds in mathematical education (Ažubalis 1993, 1997). Attempts will be made to discuss the circumstances under which mathematics textbooks by A. Smetona appeared, to outline their main features and to identify their importance to the history of Lithuanian culture.

The beginning of World War I (WWI) and retrieval of Russian army from



**Figure 2.** Antanas Smetona (a photograph (by A. Jurašaitis taken before 1915).

Lithuania opened new doors for Lithuanians to intensify activities in education. Therefore, pursuing more comprehensive education in the mother tongue, they had to initiate establishment of national senior schools. His contemporaries recalled that before Germans seized Vilnius, A. Smetona convened representatives of Lithuanian intelligentsia, who had not retreated to Russia, in the premises of the Lithuanian Science Society and “made impassioned pleas, simply asked them to stay in Lithuania” (Janulevičius, 1934: p.189). Then all their efforts were allocated to establishment of new Lithuanian gymnasiums instead of Russian schools. Initially, they opened in the biggest Lithuanian towns: Vilnius, Kaunas, Šiauliai, Panevėžys and Marijampolė. However, the developing Lithuanian national school lacked not only Lithuanian teachers but also textbooks of the main study subjects for gymnasiums as such textbooks in the Lithuanian language were not available at all at that time.

## **2. One of the Concerns of the Textbook Publishing Commission under the Lithuanian Science Society Was Preparation of Lithuanian Textbooks of Mathematics**

At the beginning of the 20th century, the Lithuanian Science Society, which emerged during the period of Lithuanian national revival and after the lift of the Lithuanian press ban, was distinguished by its varied activities, which contributed to satisfaction of the most necessary needs of Lithuanian science, education and culture. Preparation and publishing of Lithuanian textbooks for senior schools should be mentioned as one of the most significant works of the organisation. In the changing international context, the Lithuanian intelligentsia, who had stayed in Vilnius, elected a new Textbook Publishing Commission under the LSS in the autumn of 1915, which also included A. Smetona, one of the founders of LSS, a jurist, publicist and a Lithuanian public figure (X Visuotinis..., 1919: p. 621). The available archives contain information on LSS, which was active in development of Lithuanian senior schools as well as in preparation of textbooks for various study subjects. For example, starting with 15 October 1915 the agendas for LSS meetings frequently included “issues on preparation, reading, reviewing and publishing of textbooks” (Valaitis, 1932: p. 18). Thus, A. Smetona actively engaged in activities of the specially established Textbook Publishing Commission, fulfilled the nation’s expectations and supported publication of Lithuanian textbooks for the main study subjects. At the same time, his name was associated with appearance of one of the first arithmetic and algebra textbooks for Lithuanian gymnasiums.

Preparing textbooks for study subjects unrelated to the Lithuanian language, TPC decided to use experience of neighbouring nations and translate textbooks from foreign languages adapting them for Lithuanian schools. A. Smetona once said: “Writing a textbook or at least translating it from a foreign language, one needs not so much of an exceptional talent but rather has to be diligent and careful and, naturally, has to have a good command of the Lithuanian language” (Smetona, 1915: p. 18). TPC designated A. Smetona to take regard of prepara-

tion and publication of “one of the most complicated” textbooks for arithmetic and algebra for senior (secondary) schools. Such designation cannot be seen as accidental and A. Smetona’s favourable references to good knowledge of mathematics were, perhaps, well known: “mathematics, modern and old languages are relevant not only for obtaining maturity certificate. Of course not. These study subjects sharpen the mind; therefore, it is important to know them later, having entered the University” (Smetona, 1990a: p. 134). However, such tasks imposed certain challenges as mathematical terms had not established in the Lithuanian language by that time and the majority of linguists and mathematicians, who had intentions to coin the terminology, had retreated to Russia as early the beginning of World War I. Naturally, appropriate consultations were not available and A. Smetona had to rely on his own knowledge. Thinking of terminology, he followed the principle: “anyone who wants to coin good terms, has to be ‘a philologist’ even to the smallest extent”, “it is necessary to be at least gropingly aware of the laws of Lithuanian etymology” (Smetona, 1990b: p. 173). As is widely known, A. Smetona is referred to as a profound authority and expert in the Lithuanian language (it should be pointed out that A. Smetona, the then gymnasium learner, took part in expeditions with the prominent linguist Jonas Jablonskis (1860-1930, founders of the standard Lithuanian language) and became his strenuous follower). The reports on TPC activities and the bibliography of A. Smetona’s works compiled by I. Kisinis confirm completion of one of “the most complicated” tasks assigned by TPC through the prepared books on theories of arithmetic and algebra and sets of mathematical problems and the assigned authorship of them.

### 3. “Aritmetikos Teorija” (Theory of Arithmetic)

“Textbook of Arithmetic Theory”, which was published in 1916 (also referred to as “A Concise Textbook of Arithmetic” in the sub-title and titled only as “The Theory of Arithmetic” starting with the second edition) became the first textbook of mathematics prepared by A. Smetona, which received a particularly favourable recognition. However, the author of the textbook remained unknown and hidden under the pseudonym J-is until its 5th edition (Smetona, 1921). However, the study subject itself was clearly defined: “Arithmetic, or the science of numbers, teaches to recon or calculate, that is, it teaches to get a new single number from two or more numbers following certain laws” (J-is, 1916: p.3). Five years later and preparing the 5th edition of textbook for publication, its preface revealed the author behind the pseudonym J-is. That was A. Smetona, the first president of the state of Lithuania, who further explained that writing his textbook he used the textbook by Masing<sup>2</sup>, a teacher in German gymnasium in Petersburg written in the German language (Figure 3(a)). The author expressed his deep regret about the failure in the whirl of war to contact the author of the

<sup>2</sup>It is possible that it was *Ferdinand Masing*, a teacher of Petersburg gymnasium and real school under St. Ann Church of German Evangelical Reformats. See: Гельбке Ф. Ф. Календарь для учителей на 1908-1909 уч. Годъ, ч . II, С. Петербургъ, 1908, с. 36.

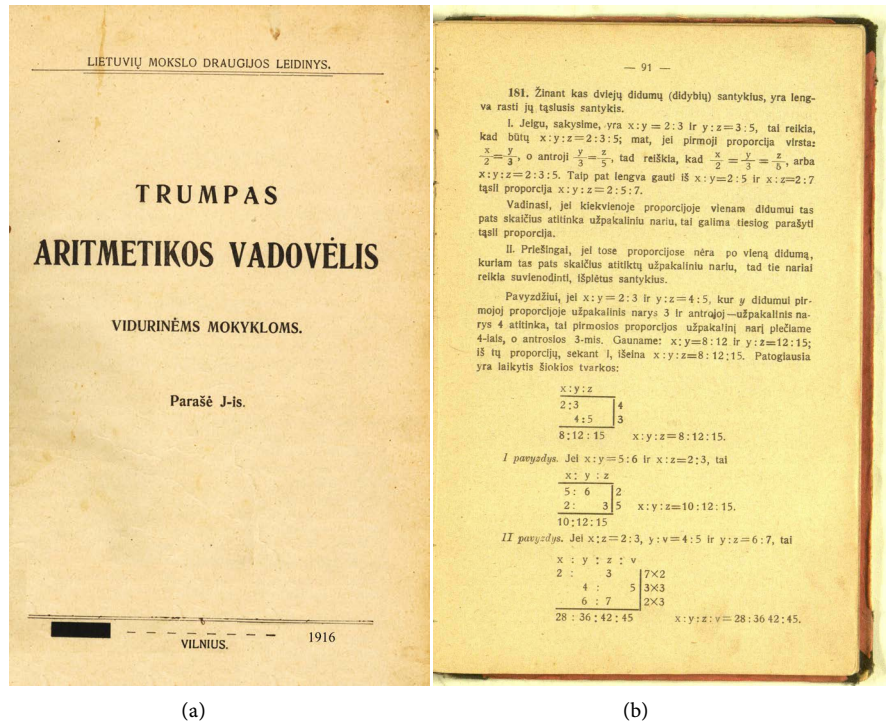


Figure 3. (a) A textbook of Theory of Arithmetic (1916) and (b) fragment of book (page 91).

original textbook and to ask for his permission to use the book. After the restoration of the statehood of Lithuania and return of the majority of Lithuanian teachers and linguists from Russia, the textbook was revised, the terminology was aligned with the one in another textbook by Andrey Kiselyov (A. П. Киселёв, 1852-1940, Russian Mathematician), which was published in Voronezh and translated by J. Jablonskis into Lithuanian. Moreover, the glossary “Aritmetika: Mokslo pradžia ir terminai” (Arithmetic: the Primer and Terms) published in Russia in 1917 (Aritmetika..., 1917). The remaining text of the textbook was once again reviewed and corrected by mathematics teacher Pranas Mašiotas (1863-1940), who had returned together to Lithuania. Therefore, considering own contribution to preparation of “Aritmetikos teorija” (The Theory of Arithmetic), in the preface of its 5th edition published in 1921 A. Smetona wrote: “...partially my and not my work. It is mine to the extent that I have translated and remade parts of it. It is not my work to the degree; the textbook has been touched by the hands of J. Jablonskis and P. Mašiotas” (Smetona, 1921: p.4). In further editions of the textbook, its content did not undergo any significant changes: it consisted of nine concise chapters. Initially learners are acquainted with integer numbers, are taught to write them down, to reckon and to calculate. Roman numerals are presented. Then the main four arithmetical operations and ways of their performing are presented, further concrete numbers are given. In addition, exponentiation is also discussed describing multiplication. Introducing divisibility of integer numbers, the author broadly presents not only usual divisibility rules (for 2, 3, 5) but also “non-traditional” ones (for 4, 6, 8, 9,

12, 15, 18, 24, 25, 36, 72, 125) and explained how to find the greatest common divisor and smallest common multiple. Other two chapters introduce prime and compound numbers, present common and decimal fractions (including pure and mixed periodical ones) and operations with them. Further learners are introduced with estimation, ratios and proportions. Presentation of content is finalised presenting solutions of practical problems. The last chapter contains other practical problems of “daily life”: calculation of exchange (*currency swaps*), compounds, percentage, interests, bills of exchange, discounts. The third chapter “The Concrete Numbers” evokes special interest as not only units of measures used in old Lithuania are presented (length: *mylia (mile)*, *varstas (verst)*, *sieksnis (fathom)*, *aršinas (yard)*, *pėda (foot)*, *colis (inch)*, dry measure units: *ketvirtis (quarter)*, *gorčius (garnet)*, liquids: *bačka (barrel)*, *stuopa (flagon)*, weight: *birkavas (berkovec)*, *pūdas (pood)*, *svaras (pound)*, *skrupulas (scrupulum)*). The chapter also includes measurement units used in separate Lithuanian regions, for example, *pūras (12 garnets)*, *siekas (dry measure, 6 garnets)* known in Kaunas Governorate; *kartis (32 garnets)*, *gorčius (garnet)*, etc. used in Suwałki Governorate. Moreover, Julian calendar and Gregorian calendar are also presented and, naturally, at the end, the textbook introduces the newly emerging decimal measures at that time (Figure 3(b)).

It is necessary to note that contemporaries of that time noticed that the content of “Aritmetikos teorija” (The Theory of Arithmetic) coincided with “a course of arithmetic in a Russian gymnasium” (Jakštas, 1919a: p. 87). Further comparison of the content with the arithmetic textbook by Andrej Kiseliyov, which was well-known in the whole Russian Empire, revealed that the first three chapters of the textbooks were similar but further presentation of the material differed. Therefore, the then reviews stated that “the textbook is more or less suitable for teaching purposes just like that by Kiselyov” (Stoukus, 1922).

However, it is important to emphasise the originality of “Aritmetikos teorija” (The Theory of Arithmetic) referring to the new terminology introduced in the textbook. Though some criticism about the length and was expressed regarding the terms in the textbooks, which were seen as too long and irregular (Antanaitis, 1918: p. 24), the majority of terms used in the first edition of textbook by A. Smetona have reached our times: for example, *taisyklė (rule)*, *skaitmuo (numeral)*, *skaičiavimo būdas (method of calculation)*, *pirminiai ir sudėtiniai skaičiai (prime and composite numbers)*, *sistema (system)*, *suma (sum)*, *skirtumas (difference)*, *liekana (residual)*, *lygybė (equality)*, *skliausteliai (brackets)*, *dalumo žymės (rules of divisibility)*, *skaidymas (segmentation)*, *lentelė (table)*, *procentai (percent)*, *palūkanos (interests)* and others. Other mathematical terms coined by him would be unknown and incomprehensible: e.g., *sąvokojimas (definition)*, *ardas (chapter)*, *dėstymas (addition)*, *imstymas (deduction)*, *padaugas (product)*, *saikas (divider)*, *sėtos (even)* and *lykos (uneven)* numbers, *saikotojas (multiple)*, *skaidinys (fraction)*, *skaitlininkas (numerator)*, *ženklininkas (denominator)*, *treinė (the rule of three)* and others. As it has been mentioned before, the terms in the second edition were aligned with the arithmetic terms suggested by J.

Jablonskis and P. Mašiotas (established in Voronezh). However, opinions were received (Adomas Jakštas-Dambrauskas, 1860-1938, Lithuanian encyclopaedist, Honorary Doctor of Mathematics<sup>3</sup>) that “terms of Vilnius” were better than the one coined in Voronezh (Jakštas, 1919b: p. 358). Due to escalated discussions about appropriateness of mathematical terms and starting with the second edition of the textbook “Aritmetikos teorija” (The Theory of Arithmetic), the terms of “Vilnius” and “Voronezh” were indicated side by side. Only the 5th edition contained terminology, which has reached our times. Thus, “Aritmetikos teorija” (The Theory of Arithmetic) significantly contributed to establishment of the currently used arithmetic terms, e.g.: *suma* (sum), *dėmuo* (component), *turinys* (content), *atėminys* (subtrahend), *dauginamasis* (multiplicand), *daugiklis* (multiplier), *vienaženklis* (one digit number), *daugiaženklis* (many-figured number) and others. The reviewers also indicated some methodological limitations. Firstly, confusing explanations in definitions and theorem proofs were criticised, the purpose of including certain theorems was questioned. The textbook was also said to lack schemes for calculating in writing, comprehensive rules of identifying denominators of fractions, better visualised approximate division of decimal fractions and others. Feeling possible shortcomings of “Aritmetikos teorija” (The Theory of Arithmetic), its author responded in the following way: “I think that having returned to Lithuania from Russia our linguists and mathematicians will correct my imperfect attempt and hope that our teachers of mathematics will write a better theory of arithmetic in the course of time” (Smetona, 1921: p. 3). However, it is necessary to acknowledge that the textbook filled the gap of arithmetic teaching aids, was used for a decade and later was revised seven times (1st edition in 1916, 2nd edition in 1918, 3rd and 4th editions in 1920, 5th edition in 1921, 6th edition in 1922, 7th edition in 1924). Such success of the textbook was confirmed by the reviewer Jonas Kartanas in 1930, who stated that “the textbook has not come under any competition up to now and is published rather well” and that “the requirements for the course of arithmetic set for the first forms in senior schools are met” (Lithuanian..., 1930: p. 5).

#### 4. “Algebros Teorija” (Theory of Algebra)

In 1916 the second mathematical publication was prepared by A. Smetona, which consisted of two parts “Elementarinės algebros vadovėlis” (Textbook of Elementary Algebra) (also referred to “Algebros teorijos vadovėlis” (Textbook of Algebra Theory)), which was a translated work. The textbook was prepared on the basis of the Russian textbook on algebra written by teacher Jakov Blumberg from Mitau Gymnasium, where A. Smetona was taught. For the first time in a textbook on mathematics published in Lithuanian, the studied object was presented: algebra teaches “to tackle mathematical problems using letters instead of numbers, it also devises general formula, which is good for solving homogenous problems, highlights and investigates those general formulas and uses them for

<sup>3</sup>More: *Contribution of A. Jakštas-Dambrauskas (1860-1938) to Mathematics in Lithuania*, *Advances in Historical Studies*, 2017, 6, 1-17.



separate cases” (Elementarinės, 1916: p. 5). The whole content of the two-part publication on algebra theory consisted of an introduction and nine chapters. The introduction of the first part determines the main algebraic phenomena—positive and negative numbers, algebraic operations, coefficient, indicator, brackets, monomials and polynomials. Further, in other three chapters learners are familiarised with the rules of four main operations, segmentation of polynomials, search for the greatest common divisor and smallest common multiple, algebraic operations with fractions, phenomena with negative indicators and determined and undetermined first degree equations, their solution and inequalities are also discussed. The concepts of axiom and theorem are also defined. The second part, which is bigger in its volume, consists of six chapters. The first three chapters introduce the remaining three operations (exponentiation, root extraction, logarithming). Later square and higher degree as well as irrational (with radicals) equations, arithmetic and geometric proportions and progressions are discussed. Further logarithms and logarithmic equations and search for the greatest common divisor of *polynomials* are explained; continued fractions and their formation are shown. At the end of the course of algebra elements of combinatorics (inversion, collation, combination) are presented, the binomial theorems are derived. The book also emphasises calculations applicable in daily life, learners are familiarised with how to apply logarithms and to calculate compound percent, deposits, forward taxes and rent (Figure 4).

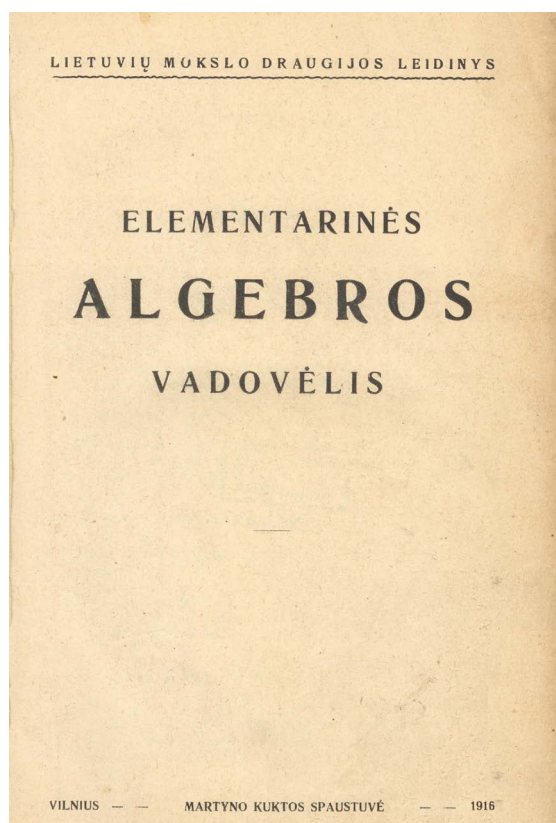


Figure 4. A textbook of Theory of Algebra (1916).

The textbook “Algebros teorijos” (The Theory of Algebra) received more modest evaluation compared to “Aritmetikos teorija” (The Theory of Arithmetic). Though it was published as one edition only but it is always referred to as the first textbook on the subject in the Lithuanian language. Preparing the second edition of this textbook in 1918, Marcelinas Šikšnys (1874-1970), a teacher of mathematics, wrote the introduction, aligned the terms of algebra and rewrote “the places of the original, which contradicted the current methods of teaching algebra”. Moreover, the tenth chapter was additionally added, which presented rearrangement of radicals, fractional equations, symmetric (reflection) equations, binomial equations of higher degree, the main algebra (Gauss) theorem, second degree inequalities and Archimedes’ principle. In such a way, the textbook with two titles: Part 1—“Algebros teorija” (The Theory of Algebra) and Part 2—“Elementarinės algebros vadovėlis” (Textbook of Elementary Algebra) was republished and undoubtedly served the process of teaching this study subject in the first senior Lithuanian schools.

As it is known, the discussed textbook was prepared following the original textbook written at the end of the 19th century (around 1893) (Šikšnys, 1919a: p. 3), therefore, the lack of originality and systematicity was well understood and justified (Jakštas, 1919c: p. 71). On the other hand, the latter teaching aid is valuable and has to be approached from a different perspective, i.e., as a wish to explain all the elementary theory of algebra in Lithuanian. It has to be noted that this objective was fully achieved: though the textbook was acknowledged “to hardly differ from other conventional [Russian J. B.] textbooks on algebra”, it appeared the first time in the Lithuanian language and was used in senior Lithuanian schools. Regardless reproaches that the second edition of algebra was evaluated only as satisfactory because it was prepared following the outdated original, it was planned to use it as long as a more suitable teaching aid became available (Jakštas, 1920: p. 72), it is necessary to acknowledge that “Algebros teorija” (The Theory of Algebra) fulfilled its purpose. The majority of Lithuanian equivalents of algebra terms created by A. Smetona and presented in the above-mentioned textbook, such as: *didybė* (size), *tiekybė* (phenomenon), *gliaudymas* (solution), *išrodymas* (proof), *nenusakoma* (undefined), *daugintojas* (equation), *galinimas* (exponentiation), *žymininkas* (indicated), *Iygmuo* (lygtis), *saikas* (divisor), *nenutrūkstamas skaidinys* (continued fraction), *sija* (compound), *pamatas* (foundation) and others were not accepted. They were pushed out by terms suggested by M. Šikšnys (Šikšnys, 1919b). However, some algebra terms introduced by A. Smetona (*lygybė* (equality), *nelygybė* (inequality), *tapatybė* (identity), *šaknis* (root), *šaknies traukimas* (evolution), *vienanaris* (monomial), *dvinaris* (binomial), *trinaris* (trinomial), *daugianaris* (polynomial), *narys* (term), *menamieji skaičiai* (imaginary numbers), *radikalas* (radical), *natūrinis logaritmas* (natural logarithm), *logaritmų lentelė* (table of logarithms), *logaritnavimas* (logarithming), *teorema* (theorem), *dėsnis* (law) and others have reached our times and are still in use. In addition to the discussed textbooks on mathematics, in the period of 1915-1916 A. Smetona also reviewed and edited the language of books of

arithmetic problems (Part 1 and Part 2) and algebra (Part 1) (*Aritmetikos...*, 1916; *Aritmetikos...*, 1915; *Algebros...*, 1918; *Kisinas*, 1935). All the above-mentioned books of problems were dedicated to secondary schools and prepared referring to the content of published teaching aids of arithmetic and algebra theories. The exceptional feature of them all was that they included practical problems from Lithuanian environment that were useful for “daily life” and, at the same time, insensibly consolidated mathematical knowledge itself. Thus, during World War I, the idea of Lithuania’s independence was revived successfully developing the system of Lithuanian education and publication of all the discussed textbooks and books of problems confirm the fact that “that this is one of manifestations of our progressing culture” (*Antanaitis*, 1918).

## 5. Conclusion

Under unfavourable conditions (ongoing WWI, part of the intelligentsia scattered in different foreign countries) Lithuanian textbooks for different study subjects including arithmetic and algebra for high (secondary, gymnasium) schools were published. A. Smetona, who was not a specialist in mathematics, successfully completed the task and prepared (or translated) textbooks of arithmetic and mathematics theory which were necessary for Lithuania at that time. Similar to other national textbooks on different study subjects, textbooks of algebra and mathematics were prepared quickly, without standard Lithuanian terminology which resulted in certain didactic and linguistic inaccuracies. They all were evaluated from the subject-specific and historical perspectives. In terms of the subjects itself “*Aritmetikos teorija*” (The Theory of Arithmetic) was more modern than “*Algebros teorija*” (The Theory of Algebra). Therefore, it is not by chance that the first one received more attention and seven editions were published.

Although the textbooks later received criticism from specialists in pedagogy, didactics or linguistics, it is necessary to emphasize their becoming an indicator of Lithuanian cultural progress at that time. And most importantly, it was the first successful thought of mathematics in Lithuanian. It is also preferable to evaluate these textbooks from historical point of view. Firstly, there was an attempt to standardize the Lithuanian terminology of arithmetic and algebra. Secondly, the textbooks had an influence on the development of both teaching mathematics and education in Lithuania in general. Alongside with the other LSA textbooks, the textbooks of arithmetic and algebra paved the way for national school and culture.

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## Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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