

## Certificate

Office of the Registrar  
Faculty of Natural Sciences  
"Eötvös Lóránd" University  
Pf. 330  
Budapest H-1445  
Hungary

To whom it may concern

February 4, 2002

Hereby I certify that this page, and the following 11 pages (numbered from 1 to 12 and marked individually by our seal), contain the exact translation of all notes recorded in Gábor Hetyei's report book.

The report book contains the list of all the classes attended, and all grades obtained. The possible grades obtainable are (from the worst to the best): inadequate, adequate, mediocre, good, eminent.

Signature

### Beginning of the Translation of the Report Book

Translation of page 3:

Student's registration number: *II-44/1983-84*.

This lecture book belongs to: *Gábor Hetyei*,

who was born in *Pécs* (city), *Baranya* (county), *Hungary* (country) on *May 1, 1965*, and is a *Hungarian* citizen.

Mother's maiden name: *Judit Keresztfalvi*.

He is a *regular* student at *the Eötvös Lóránd University*, Faculty of *Natural Sciences*, *Mathematics* major.

Date: *Budapest, December 15, 1983*.

Vice Dean

Translation of page 4:

High-school final examination taken at: "Leówey Klára" Secondary School, German Minority Class, Pécs.

Examination date: June 9, 1983.

Examination certificate number: D-10/1983.

Grade: *Eminent*.

Nothing is written on page 5.

Translation of pages 6-7:

**Gábor Heteyi, registered at the Faculty of Natural Sciences, as a first year student. Academic year 1983/84, first semester, regular student, Mathematics major.**

Subject and lecturer's name	No. of classes/week		Date	Grade for exercises	Examination grade
	Lectures	Exercises			
Political economics (L. Kurtán)	-	2	Dec 15	eminent (Dec 15)	-
Physical education	-	2		-	-
Russian language (Kántorné)	-	3	Dec 16	eminent (Dec 16)	-
Analysis (L. Czách)	4	4	Dec 27	eminent (Dec 27)	eminent (Dec 27)
Algebra (E. Fried)	2	2	Dec 17	eminent (Dec 17)	eminent (Dec 23)
Number theory (J. Pelikán)	2	1	Jan 13	eminent (Jan 13)	eminent (Jan 13)
Geometry (K. Böröczky)	2	2	Jan 20	eminent (Jan 20)	eminent (Jan 20)
Knowledge of national defence		1			

**Registration closing:** December 19, 1983.

**Date:** Budapest, February 7, 1984.

**Grade average:** *eminent*.

Translation of pages 8-9:

*Gábor Heteyei, registered at the Faculty of Natural Sciences, as a first year student. Academic year 1983/84, second semester, regular student, Mathematics major.*

Subject and lecturer's name	No. of classes/week		Date	Grade for exercises	Examination grade
	Lectures	Exercises			
Political economics (L. Kurtán)	2	-	May 14		
History of philosophy (L. Héthelyi)	2	-	May 11	eminent May 11	-
Analysis (L. Czách)	4	4	May 21	eminent (May 21)	eminent (May 21)
Algebra (E. Fried)	3	2	May 18	eminent (May 18)	eminent (May 18)
Geometry (K. Böröczky)	3	2	June 14	eminent (June 14)	eminent (June 14)
Finite mathematics (L. Lovász)	2	2	June 4	eminent (June 4)	eminent (June 4)
Introduction to computer science (J. Demetrovics)	2	-	May 18	eminent (May 18)	-
Knowledge of national defence		1			
Physical education (I. Szalai)	-	2	May 18		
Group theory (P.P. Pálffy)	2	-	May 17	eminent (May 17)	

**Registration closing:** *April 2, 1984.*

**Date:** *Budapest, September 10, 1984.*

**Grade average:** *eminent.*

Translation of pages 10-13:

*Gábor Heteyi*, registered at the Faculty of Natural Sciences, as a second year student.  
**Academic year 1984/85, first semester, regular student, Mathematics major.**

Subject and lecturer's name	No. of classes/week		Date	Grade for exercises	Examination grade
	Lectures	Exercises			
Dialectical materialism (L. Héthelyi)	-	2	Dec 12	eminent (Dec 12)	
Physical education (I. Szalai)	-	2	Dec 13		
Analysis (L. Czách)	4	3	Dec 13	eminent (Dec 23)	eminent (Dec 23)
Algebra (E. Fried)	2	2	Dec 17	eminent (Dec 17)	eminent (Dec 17)
Geometry (K. Böröczky)	3	2	Dec 22	eminent (Dec 22)	eminent (Dec 22)
Numerical Methods (T. Fiala)	-	3	Dec 13	eminent (Dec 13)	
Introduction to computer science (J. Demetrovics)	-	3	Dec 22	eminent (Dec 22)	-
Linear programming (A. Prékopa)	2	-	Jan 4	-	eminent (Jan 4)
Knowledge of national defence					
Group theory (P.P. Pálffy)	2	-	Dec 10	eminent (Dec 10)	
Nonstandard analysis (L. Csirmaz)	2	-	Dec 11		
English language (E. Györffy)	-	6	Dec 11	eminent (Dec 11)	
Seminar on algebra (E. Fried)	-	3	Dec 17		

**Registration closing:** *October 12, 1984.*

**Date:** *Budapest, February 5, 1985.*

**Grade average:** *eminent.*

Translation of pages 14-17:

*Gábor Heteyi, registered at the Faculty of Natural Sciences, as a second year student. Academic year 1984/85, second semester, regular student, Mathematics major.*

Subject and lecturer's name	No. of classes/week		Date	Grade for exercises	Examination grade
	Lectures	Exercises			
Historical materialism (L. Héthelyi)	-	2	May 13		
Physical education (I. Szalai)	-	2	May 20		
Analysis (L. Czách)	4	2	June 7	eminent (June 7)	eminent (June 7)
Algebra (E. Fried)	3	2	May 22	eminent (May 22)	-
Differential Geometry (E. Szolcsányi)	4	2	May 22	eminent (June 1)	eminent (June 14)
Topology (M. Bognár)	2	-	May 31	-	eminent (May 31)
Numerical Methods (T. Fiala)	-	2	May 20	eminent (May 20)	
Physics (I. Szabó)	3	2	May 17	eminent (May 15)	
Knowledge of national defence	1	-			
English language (E. Györffy)	-	6		eminent	
Seminar on algebra (P.P. Pálfy)	-	2	May 14	eminent (May 14)	
Exercises in numerical methods (T. Fiala)	-	2	May 20	eminent (May 20)	

**Registration closing:** *March 11, 1985.*

**Date:** *Budapest, September 17, 1985.*

**Grade average:** *eminent.*

Translation of pages 18-19:

*Gábor Heteyi, registered at the Faculty of Natural Sciences, as a third year student. Academic year 1985/86, first semester, regular student, Mathematics major.*

Subject and lecturer's name	No. of classes/week		Date	Grade for exercises	Examination grade
	Lectures	Exercises			
Scientific socialism (Gy. Kerekes)	3	-	Dec 10		
Physical education (I. Szalai)	-	2	Dec 12		
Complex Analysis (Gy. Petruska)	3	2	Jan 3	eminent (Jan 3)	eminent (Jan 3)
Ordinary differential equations (L. Pál)	2	2	Dec 19	eminent (Dec 11)	
Functional Analysis (L. Czách)	3	-	Jan 04		eminent (Jan 5)
Probability Theory (J. Mogyoródi)	3	2	Dec 19	eminent (Dec 19)	eminent (Dec 19)
Physics (B. Fogarassy)	3	2	Jan 21	eminent (Jan 21)	eminent (Jan 21)
English language (M. Gedeon)	-	6	Dec 6	eminent (Dec 6)	
Seminar on finite permutation groups (P.P. Pálfy)	-	2	Dec 9	eminent (Dec 9)	

**Registration closing:** *November 20, 1985.*

**Date:** *Budapest, February 6, 1986.*

**Grade average:** *eminent.*

Translation of pages 20-23:

*Gábor Hetyei*, registered at the Faculty of Natural Sciences, as a third year student.  
**Academic year 1985/86, second semester, regular student, Mathematics major.**

Subject and lecturer's name	No. of classes/week		Date	Grade for exercises	Examination grade
	Lectures	Exercises			
Scientific socialism & history of labour movement(Gy. Kerekes)	3	-	Dec 12 1985	-	eminent (May 20)
Functional Analysis (L. Czách)	3	2	June 9	eminent (June 9)	-
Numerical Methods (T. Fiala)	-	3	May 15	eminent (May 15)	
Probability Theory (J. Mogyoródi)	3	2	May 26	eminent (May 15)	
Partial differential equations (L. Simon)	2	2	May 16	eminent (May 21)	
Ordinary differential equations (L. Pál)	2	-	June 3		eminent (June 3)
Variation calculus (A. Kósa)	2	1			eminent (June 17)
Professional internship (Bognárné)		4 weeks	Sept 9		
English language (M. Gedeon)	-	3	May 9	eminent (May 9)	
Physical education (I. Szalai)	-	2	May 11		
Seminar on algebra (P.P. Pálffy)	-	3	May 12	eminent (May 12)	

**Registration closing:** March 8, 1986.

**Date:** Budapest, June 30, 1986.

**Grade average:** *eminent*.

Translation of pages 24-25:

*Gábor Heteyi*, registered at the Faculty of Natural Sciences, as a fourth year student.  
**Academic year 1986/87, first semester, regular student, Mathematics major.**

Subject and lecturer's name	No. of classes/week		Date	Grade for exercises	Examination grade
	Lectures	Exercises			
Partial differential equations (L. Simon)	2	1	Dec 12		eminent (Jan 14)
Series of functions (L. Pál)	2	2	Dec 19	eminent (Dec 19)	eminent (Dec 19)
Set theory & mathematical logic (A. Hajnal)	2	-	Dec 30		eminent (Jan 7)
Marxist seminar	2	-	Dec 17		eminent (Dec 17)
Matroid theory (A. Recski)	2	-	Dec 10		
Lattice ordered groups (R. Wiegandt)	2	-	Jan 19		eminent (Jan 19)
Applications of algebra (L. Babai)	3	-	Jan 23		eminent (Jan 23)
Exercises in the theory of algorithms (L. Babai & L. Lovász)	-	2	Jan 23		
French language (T. Nemes)	-	6	Jan 26	eminent (Jan 26)	

**Registration closing:** *November 26, 1986.*

**Date:** *Budapest, February 12, 1987.*

**Grade average:** *eminent.*

Translation of pages 26-29:

*Gábor Hettyei*, registered at the Faculty of Natural Sciences, as a fourth year student.  
**Academic year 1986/87, second semester, regular student, Mathematics major.**

Subject and lecturer's name	No. of classes/week		Date	Grade for exercises	Examination grade
	Lectures	Exercises			
Mathematical logic (I. Juhász)	2	-	May 22		eminent (May 22)
Marxist seminar	2	-	May 18		eminent (May 18)
Ordered semigroups (R. Wiegandt)	2	-	April 17		eminent (April 17)
Practical applications of algebra (L. Babai and P.P. Pálffy)	3	-	May 12		eminent (May 29)
Matroid theory (A. Recski)	-	3	May 27	eminent (May 27)	
Combinatorial Analysis (L. Székely)	2	-	May 15		eminent (May 21)
Complexity of algorithms (L. Babai and É. Tardos)	2	-	May 5		
Computational Geometry (A. Lubiw)	2	-	June 5		eminent (June 5)
French language (T. Nemes)	-	6	June 5	eminent (June 5)	
Seminar on the theory of algorithms (L. Lovász)	-	2	June 18	eminent (June 18)	
Polyhedral combinatorics (L. Lovász)	2	-	June 25		eminent (June 25)

**Registration closing:** *March 23, 1987.*

**Date:** *Budapest, June 29, 1987.*

**Grade average:** *eminent.*

Translation of pages 30-31:

*Gábor Hettyei*, registered at the Faculty of Natural Sciences, as a fifth year student.  
**Academic year 1987/88, first semester, regular student, Mathematics major.**

Subject and lecturer's name	No. of classes/week		Date	Grade for exercises	Examination grade
	Lectures	Exercises			
Professional internship (Bognárné)	-	15	Feb 1		
French language (T. Nemes)	-	6	Dec 10	eminent (Dec 10)	
Seminar on algebra (E. Kiss)	-	3	Dec 7		eminent (Dec 7)
Tame congruences (E. Kiss)	2	-	Dec 7		eminent (Dec 7)
Applications of graph theory (A. Frank)	-	2	Dec 8	eminent (Dec 8)	
Matroids (A. Frank)	2	-	Dec 8		
Practical applications of discrete mathematics (J. Beck)	-	3	Dec 9	eminent (Dec 9)	
Data structures (Gy. Elekes)	2	-	Dec 14		eminent (Dec 14)

**Registration closing:** *October 19, 1987.*

**Date:** *Budapest, February 11, 1988.*

**Grade average:** *eminent.*

Translation of pages 32-33:

*Gábor Heteyi*, registered at the Faculty of Natural Sciences, as a fifth year student.  
**Academic year 1987/88, second semester, regular student, Mathematics major.**

Subject and lecturer's name	No. of classes/week		Date	Grade for exercises	Examination grade
	Lectures	Exercises			
Professional internship (Bognárné)	-	15	May 19		
French language (T. Nemes)	-	6	May 11	eminent (May 11)	
Algebraic combinatorics (L. Babai)	1	-	March 17		eminent (March 17)
Seminar on algebra (E. Fried)	3	-	May 9		
Ring theory (R. Wiegandt)	2	-	May 15		eminent (May 15)
Applications of modern algebra (L. Rónyai)	3	-	June 16		eminent (June 16)
Seminar on finite geometries (T. Szőnyi)	-	2	May 6	eminent (May 6)	

**Registration closing:** *March 29, 1988.*

**Date:** *Budapest, June 27, 1988.*

**Grade average:** *eminent.*

Nothing is written on pages 34-49.

Translation of pages 50-52:

### Final examinations

Subject	Date	Grade
Political Economics	June 20, 1984	eminent
Philosophy	May 20, 1985	eminent
Algebra	May 22, 1985	eminent
Probability Theory & Numerical Methods	May 26, 1986	eminent
Analysis	June 9, 1986	eminent
Fourth year final examination	January 26, 1988	eminent

Nothing is written on page 53.

Translation of page 54:

### **Official notes**

Transferred from the “Marx Károly” Economics University on December 15, 1983.

Based on his medium-level state examination in Russian language, he is dispensed of studying Russian (April 10, 1984).

Fellowship of the Hungarian People’s Republic awarded on November 13, 1986.

Nothing is written on pages 55-59.

Translation of page 60:

### **TDK<sup>1</sup> Membership, Honors, Prices, and Awards**

First prize at the “Riesz Frigyes” Interschool Competition, organized by the “Körösi Csoma Sándor” College on January 31, 1986.

Fellowship of the Hungarian People’s Republic awarded on November 9, 1987.

2nd price for a TDK paper (second semester of the academic year 1986/87).

“Excellent Student of the Faculty” award for the academic year 1987/88, awarded on April 11, 1988.

Translation of page 61:

### **First Class Certificate**

This certificate has been issued to *Gábor Heteyi*, who is born on *May 1, 1965* in *Pécs, Baranya county*, in *Hungary*, who attended the *faculty of sciences* at the “*Eötvös Lóránd*” *University*. Based on the decision of the State Examination Board, he is declared to be a certified *mathematician*.

*Budapest, June 27, 1988.*

Translation of pages 62-63:

### **Notes on the State Examination**

Thesis grade: *eminent*

Thesis title: *Catalan numbers and their generalizations*

Date: *Budapest, academic year 1987/88.*

Grade at the state examination: *eminent*. Date: *June 29, 1988.*

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<sup>1</sup>”Tudományos Diákkör”=Student Research Circle