

Instructor: Leo Goldmakher

MATC90: Beginnings of Mathematics
University of Toronto at Scarborough
Department of Computer and Mathematical Sciences

Student Project

This project will consist of a 15-minute oral presentation, presented jointly by the two members of each project team. Although you may use visual aids (transparencies, posters, drawings, 3-D polyhedra constructed out of cardboard, etc.) you may not use notes during your presentation. You will have access to the blackboard during the talk. As there is no digital projector, you cannot use your computer as part of your presentation.

The presentations should be about the life and work of *one* of the two mathematicians assigned to your project team (see next page). Part of the presentation must be devoted to a major mathematical contribution of your chosen mathematician. However, keep in mind that your presentation should be understood by the class; moreover, as you only have 15 minutes for the entire presentation, you do not need to explain the math in gory detail – avoiding technicalities, you should explain enough so that it is clear both what the problem was, and what the main contributions of the mathematician were to the solution. You might also think about the history of the problem, and previous mathematicians who contributed to the ultimate solution. Some problems have had future consequences, which you should also discuss.

You should know more about your subject than you will have time to present. In particular, as part of your presentation, you may be asked questions by the audience. Let me stress that the presentation should be aimed at the class, not at me. It should be interesting, informative, and accurate. To address the last point, each team should also submit a list of sources used to prepare the presentation. Wikipedia is a helpful tool for getting started on your research, but should not be your final source for presented material – there are too many errors. I expect at least a few different sources to be used.

The presentations will be given during the last two lectures of the course. For the sake of fairness, every group should be prepared to present on the earlier of these dates (November 29th); the order of presentations will be determined on the 29th. Please note that the final problem set will be due on the last day of class, December 6th.

Presentations will be marked for clarity, thoroughness of preparation, and liveliness of presentation. I strongly suggest doing a practice run ahead of time – I will cut you off after 15 minutes, whether you're finished or not, so plan ahead!

If you have questions, please don't hesitate to email me or come see me in office hours.

Numbers selected in lecture

Randomized list of mathematicians

1	Napier, John	26	Laplace, Pierre-Simon
2	Kepler, Johannes	27	Möbius, August
3	Gauss, Carl Friedrich	28	Ramanujan, Srinivasa
4	Descartes, René	29	Euler, Leonhard
5	Taylor, Brook	30	Newton, Isaac
6	Galois, Évariste	31	Liouville, Joseph
7	Dirichlet, Johann	32	Gödel, Kurt
8	Cauchy, Augustin-Louis	33	Eisenstein, Ferdinand
9	Lobachevsky, Nikolai	34	Lambert, Johann
10	Poincaré, Henri	35	Chebyshev, Pafnuty
11	Germain, Sophie	36	Riemann, Bernhard
12	Weierstrass, Karl	37	Minkowski, Hermann
13	Dedekind, Richard	38	Hardy, Godfrey
14	Turing, Alan	39	Legendre, Adrien-Marie
15	Nash, John	40	Mersenne, Marin
16	Bolyai, János	41	von Lindemann, Ferdinand
17	Pascal, Blaise	42	Gibbs, Josiah
18	Cantor, Georg	43	Hilbert, David
19	de Fermat, Pierre	44	Abel, Niels Henrik
20	Leibniz, Gottfried	45	Boole, George
21	Erdős Pál	46	Noether, Emmy
22	von Neumann, John	47	Fourier, Joseph
23	Conway, John H.	48	de Moivre, Abraham
24	Green, George	49	Lagrange, Joseph-Louis
25	Poisson, Siméon	50	Daniel and Jacob Bernoulli

Arul	19
Danny C.	7
Zhuo	9
Joyce	18
Joel	50
Kaitlyn	2
Nathan	11
Meshal	29
Sam	16
Manaal	24
Rehan	36
Haroon	28
Thaksha	6
James	17
Daniel L.	8
David	4
Sherrill	33
Yao	14
Gaya	5
Pourya	1
Seher	10
Daniel M.	3
Devina	15
Shawna	32
Samira	30
Ushya	44
Shobigah	12
Judy	13
Nick	22
Susan	49