

Mathematics 3820H – Mathematics from medieval to modern times

TRENT UNIVERSITY, Fall 2020

Assignment #2

The Cubic Formula

Due on Friday, 9 October.

Please read at least Chapters XII and XIII (pp. 207-276) of *Jerome Cardan: The Life of Girolamo Cardano, of Milan, Physician*, Vol. I, by Henry Morley. These are the chapters dealing with Cardano's work on the cubic formula, the dispute with Tartaglia, and its aftermath. Follow it up with your own research into these topics. Don't forget to give references to those sources you actually use!

1. Based on the account given in the reading and on whatever your research turned, try to summarize the main events leading up to the dispute between Cardano and Tartaglia, as well as the dispute itself and its aftermath. [4]

Hint: Cardano gives his account of the history of the solution to the cubic equation in his *Ars Magna*. English translations can be found ...

2. Who do you think was at fault in the dispute between Cardano and Tartaglia and to what degree? Who should get the credit for finding a general solution to solving cubic equations? In both cases, explain why you think so. [3]
3. Give a derivation of the general cubic formula. (You need not base it on what you learned in answering the questions above. [3]

REFERENCE

1. *Jerome Cardan: The Life of Girolamo Cardano. of Milan, Physician*, Vol. I, by Henry Morley, London, 1854. It can be found online at <http://books.google.ca/books?id=lskVAAAAYAAJ> or locally on Blackboard and also on the course archive page.

NOTE. The MATH 3820H archive page is at: <http://euclid.trentu.ca/math/sb/3820H>