

Planned presentations (10pts)

General guidelines:

- The presentation should take between 15 and 30 minutes. A typed outline of the presentation should be provided to the instructor at least one day prior to the presentation.
- Although our book can be your main resource, you may supplement it with information found elsewhere. Make sure to cite the sources properly.
- Make a reasonable estimate of how much material you are able to cover in the given time slot. Make sure that you include questions or activities to engage the whole class; your presentation should not be a pure lecture.
- Select 3 or more topics, list them in the order of your preference and send them to my e-mail address stating your group number and the list of topics. I will be assigning topics on the “first come first serve” basis and if I am not able to accommodate your request, you will hear from me with other options.
- Guidelines specific to some of the topics will also be available. You may consult your presentation with me at any stage.

Presentation Topics:

1. Russian peasant algorithm: what is it, where it comes from, how and why it works (pg. 13)
2. Babylonian algebra: historical facts, an example of a problem and its solution (pg. 51)
3. Egyptian algebra: historical facts, an example of a problem and its solution (pg. 30)
4. The red auxiliary numbers – what they are and how they were used (pg. 21)
5. Other quadratures by Hipparchos. (pg. 94)
6. Puzzle paradox (pg. 131): Introduction and explanation.
7. Aristotle’s “wheel” paradox (pg. 139): Introduction and explanation
8. Irrationality of some radicals. (pg. 87, #3,5,6)
9. Constructing a line segment of length ab (a and b are given line segments). (pg. 121)
10. Mayan numeration and operations (pg. 230).
11. Mathematics of a significant ancient culture not covered in class or book (Chinese, Hindu or Islamic mathematics. If this is your choice, please also indicate the culture you chose.)
12. Division on the soroban – special problems and their solution. (I will provide the material).
13. Pythagorean triples – Babylonian solution pg 63.