

Mathematics 3010, Summer 2008: Some paper topics

1. Eudoxus and the method of exhaustion
2. Advanced Greek geometric constructions
3. Mathematics of the Golden Ratio
4. Three classical geometric construction problems
5. The parallel postulate (Euclid's fifth)
6. Archimedes methods of determining area and volume
7. Greek astronomy
8. Babylonian astronomy
9. Chinese story problems
10. Pappus of Alexandria
11. Mayan numbers and astronomy
12. The abacus and counting board
13. Diophantine equations
14. Qin Jiushao – congruences with non-prime moduli, synthetic division
15. Bhaskara's solution of the Pell equation
16. Development of spherical trigonometry
17. Leonardo of Pisa (Fibonacci)