

Exam 1 Essay Questions

On the day of your exam, I will choose 4 of these 6 problems. You will have to write on 3 of the 4 chosen problems.

1. Discuss the positional number system, the multiplicative grouping system, and the simple grouping system. Give an example of each system (using proper symbols) and write about their merits and drawbacks.
2. Discuss how ancient Egyptians wrote their integers and their fractions. Use their symbols and include examples. We also talked about two methods the Egyptians used to multiply two numbers. Using one of these methods (your choice), show how many they would have multiplied $25 \cdot 36$. (Note: These numbers will be changed on exam day.)
3. Discuss math done in ancient China. Include a discussion of the Nine Chapters and the fang cheng method
4. State and prove the Pythagorean theorem. You may give any of the 300+ valid proofs
5. Ancient Indians found a way to “square a pair of squares” and to “square a rectangle.” Describe what is meant by this, and show the procedure they used.
6. Discuss Euclid’s Elements. Include a discussion on how it was structured and its historical impact on math. Also, show how Euclid bisected an angle using a straightedge and compass.

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