
History of Mathematics

Math 395 Spring 2010
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Fowler 310 MWF 10:30am - 11:25am
<http://faculty.oxy.edu/ron/math/395/10/>

QUIZ #1

NAME: _____

TOTAL _____/25

PART I: LONG-ANSWER QUESTION (10 points)

Provide the name of a Greek mathematician you consider the greatest of all time. Give multiple reasons for why this particular mathematician should be considered the greatest as well as basic information about their life and achievements. **WRITE LEGIBLY!**

Name of Greatest Greek Mathematician: _____

PART II: SHORT-ANSWER QUESTIONS (5 points)

Write down whether the following sentences are either TRUE or FALSE.

- A. _____ Egyptians had more than one notation system for denoting numbers.
- B. _____ Babylonians were able to solve quadratic equations.
- C. _____ Euclid built upon the mathematical ideas of Archimedes.
- D. _____ All Greek geometry was computed in no more than two dimensions.
- E. _____ Hypatia discovered the secret of how to square the circle.

PART III: SHORT-ANSWER COMPUTATIONS (10 points)

Perform the following computations using techniques known to people in the relevant time period. **NO CALCULATORS ALLOWED.** Show all work and clearly indicate (i.e. circle) your answers.

1. (2 points) Use the Egyptian doubling algorithm to compute the product of 31 by 25 = 31x25

2. (3 points) Express the number $76\frac{17}{24}$ in sexagesimal.

3. (3 points) Compute the product of $\beta\kappa$ and $\delta\mu$ and the product of $\kappa\beta$ and $\mu\delta$. Express the answer(s) in Greek.

4. (2 points) Use Diophantine notation to denote the polynomial $34x^4 - 5x^3 + 12x + 108$

$x^2 := \Delta^\Upsilon$
 $x^3 := K^\Upsilon$
 $x^4 := \Delta^\Upsilon\Delta$
 $x^5 := \Delta K^\Upsilon$
 $x^6 := K^\Upsilon K$
 $\text{\AA} := \text{minus}$

$\overset{\circ}{M} := \text{units}$

symbol	value	symbol	value	symbol	value
α	1	ι	10	ρ	100
β	2	κ	20	σ	200
γ	3	λ	30	τ	300
δ	4	μ	40	υ	400
ϵ	5	ν	50	ϕ	500
ζ	6	ξ	60	χ	600
η	7	\omicron	70	ψ	700
θ	8	π	80	ω	800
	9	φ	90	$\gamma\lambda$	900