

E-320: Teaching Math with a Historical Perspective Oliver Knill, 2015 You can again just email a one line response like 1:Thales, 2: Quipu, 3: 2 ....

## Lecture 2: Quiz

Name:

### Problem 1

Today we have seen proofs of the fact that the  $\sqrt{2}$  is not rational. One of the proofs does not use the prime factorization. It has appeared by an article co-authored by

Gauss	<input type="checkbox"/>
Conway	<input type="checkbox"/>
Gauss	<input type="checkbox"/>
Thales	<input type="checkbox"/>

### Problem 2

This this important mathematical writing is



Quipu knot	<input type="checkbox"/>	Plympton 322	<input type="checkbox"/>
Ishango bone	<input type="checkbox"/>	Rynd papyrus	<input type="checkbox"/>
Bakshali Manuscript	<input type="checkbox"/>	YBC 7289	<input type="checkbox"/>

### Problem 3

What was the meaning of the number 1.245110 on the Clay tablet in which  $\sqrt{2}$  appeared? (You have to remember the the slides)

a) 2

b) 1/2

c)  $\sqrt{2}$ .

### Problem 4

On which base was the **Mayan number system** based?

2	<input type="checkbox"/>	10	<input type="checkbox"/>	20	<input type="checkbox"/>
12	<input type="checkbox"/>	60	<input type="checkbox"/>	100	<input type="checkbox"/>

## Problem 5

Which integer does this **hieroglyph** represent? Remember: “the priest holds a frog in his finger and the flower fears a monkey bending a stick.”



## Problem 6

Which of the following numbers are irrational?

$123/13$		$1 + \sqrt{2}$		$\sqrt{4}$	
$e$		$\sqrt{3}$		$\log_{10}(5)$	

## Problem 7

In which places of the world was “zero” invented? There are two and with one interpretation one can even include 3.

Central America		Pandora		Greece	
India		China		Irak	

## Problem 8

Why do we **extend** a number system? Check everything which applies

Solving equations		To have transfinite numbers		To extend operations
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## Problem 9

Surreal numbers were invented by:

- a) The Mayans
  b) Bakshali
  c) John Conway

## Problem 10

Which cultures used a place value system? There are two of the following four.

Babylonians	
Romans	

Egyptians	
Mayans	