Attendance Quiz # 1 for Dr. Z.'s MathHistory for Lecture 1 (due no later than 10 minutes after class)

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Subject:p1

with an attachment p1FirstLast.pdf

Part I: List all the "attendance questions" during the lecture, followed by your answers.

Part II:

1. (a) Use the **greedy algorithm** to express $\frac{7}{12}$ as an Egyptian fraction. Use this to equally divide 7 pizzas among 12 people.

x=12/7, ceil(12/7) = 2
1/2 + (7/12 - 1/2) =
1/2 + 1/12 [EF]

   Each diner gets half of a pizza and one-twelfth of a pizza

(b) Note that a better way to express $\frac{7}{12}$ as an Egyptian fraction is
$$\frac{7}{12} = \frac{1}{3} + \frac{1}{4} \quad .$$
Use this better way to equally divide 7 pizzas among 12 people. Why is it better?

   Each diner gets one-third of a pizza and one-fourth of a pizza. This is a better way to divide pizza because the slices are more equally relative to each other rather than having half a pizza and a twelfth of a pizza beside you.

   By giving each diner a one-third and one-fourth of a pizza, they can eat it better instead of trying to eat one big slice and one small slice.

2. Find the two smallest positive integers n, that have the property that

• If you divide n by 3 you get remainder 1 .

• If you divide n by 5 you get remainder 2 .

7+15 = 22

f(x) = (x mod 3, x mod 5)
f(0) = (0,0)
f(1) = (1,1)
f(7) = (1,2)
f(22) = (1,2)

Answer: 7 and 22

Attendance Questions:

Who is the greatest mathematician of all time? Archimedes

What was the undergrad college / university that Dennis DeTurck went to? Drexel University

What institute did Adi Shamir go to for his PhD? Weizmann Institute