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

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Email to DrZlinear@gmail.com right after class

Subject:p1

with an attachment p1FirstLast.pdf

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

Question 1: According to the internet, who is the most famous mathematician in history? Answer: Euclid

Question 2: Where did Dennis DeTurck get his undergraduate degree? Answer: Drexel University

Question 3: Where did the **S** in RSA get his pHD? Answer: Weizmann Institute

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.

Let x = 7/12 so 1/x = 12/7. The ceiling of 12/7 is 2 so the first portion is ½.

So Egyptian Fraction (7/12) = ½ + Egyptian Fraction (7/12 - ½) = ½ + Egyptian Fraction (1/12)

So the Egyptian Fraction of 7/12 = ½ + 1/12

So each person gets half a pizza and also 1/12 of the remaining pizza.

(b) Note that a better way to express $\frac{7}{12}$ as an Egyptian fraction is

$$\frac{7}{12} = \frac{1}{3} + \frac{1}{4}.$$

Use this better way to equally divide 7 pizzas among 12 people. Why is it better?

Each person gets ⅓ of a pizza and then ¼ of a pizza. This is better because it is easier to divide in ⅓ and ¼ rather than 1/12.

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 .

N = 22 and n = 22 + 15 = 37