

Attendance for Dr. Z.'s MathHistory for Lecture 7 (due no later than 10 minutes after class)

NAME: (print!) Quin Boob

Email to DrZlinear@gmail.com right after class

Subject: p7

with an attachment p6FirstLast.pdf

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

Part II:

1. In a certain country there are only two kinds of coins. One is worth 10 dollars each, and the other is worth 13 dollars each. How would you pay for a cup of coffee that costs exactly 1 dollar (without tipping!). What do you have to give to the cashier, and what does the cashier return to you?

$$\gcd(13, 10)$$

$$13 = 1 \times 10 + 3$$

$$\gcd(13, 10) = \gcd(10, 3) \quad \text{and} \quad 3 = 1 \times 13 - 1 \times 10$$

$$\gcd(10, 3)$$

$$10 = 3 \times 3 + 1$$

$$\gcd(10, 3) = \gcd(3, 1) \quad \text{and} \quad 1 = 10 - 3 \times 3 = 1 \times 10 - 3(1 \times 13 - 1 \times 10)$$

$$\gcd(3, 1)$$

$$3 = 3 \times 1 + 0$$

$$\gcd(13, 10) = 1$$

$$1 = 10 - 3(13 - 10)$$

$$1 = 10 - 3 \times 13 + 3 \times 10$$

$$1 = 4 \times 10 - 3 \times 13$$

You give 4 10 dollar coins; and they give back 3 13 dollar
coins

Quin Booth

P7

AQ1: Who was the A in RSA?
Adleman

AQ2: Who was the person who developed an algorithm for factoring large numbers using quantum computing?

Schor