

MATHEMATICS 153, SPRING 2021, QUIZ 1

Directions: The answers to this quiz are to be submitted to the instructor of your discussion section by **11:59 P.M.** on **Tuesday, April 27**. Please include your name, student identification number, and discussion section number on the worked out quiz.

1. Take the last four digits **ABCD** of your student identification number. *Using the Greedy Algorithm*, find an Egyptian fraction expression for

$$\frac{1}{A+4} + \frac{1}{B+4} + \frac{1}{C+4} + \frac{1}{D+4}$$

where you may omit all unit fractions $1/k$ such that $k \geq 10,000,000$ (note that the Egyptian numeration did not have a way of representing anything that large).

2. Find the Babylonian representation of the same number; recall that the Babylonian numeration system only went three figures to the right of the units entry.

You may use a simple calculator (only the four basic arithmetic operations) or something equivalent to work on this quiz. Although you may consult with other students and the teaching assistant(s) about these problems, the quiz is **NOT** collaborative; the answers you submit must be your own work and no one else's.