Math 255 - Spring 2022
Continued fractions by hand
15 points

This homework invites you to do some computations with continued fractions and convergents. The intention is to simulate computations by hand. Therefore it is recommended that you do not use a computer, and that you write down intermediate steps even if you use a calculator. This will help you notice what you are meant to notice by working these problems.

1. For each of the following continued fractions, compute all convergents and the value of the continued fraction.

   (a) $[1; 1, 2, 3]$

   (b) $[0; 1, 1, 2, 3]$

   (c) $[1; 1, 2, 2, 1]$

   (d) $[2; 4, 1, 2]$

   (e) $[0; 2, 4, 1, 2]$