1. Compute the values of the following infinite continued fractions:
   (a) $\frac{1}{4}$
   (b) $\frac{1}{k}$ for an arbitrary positive integer $k$.
   (c) $\frac{1}{2} + \frac{1}{3}$ and $\frac{1}{1} + \frac{1}{2} + \frac{1}{3}$
   (d) $\frac{1}{1} + \frac{1}{2} + \frac{1}{1} + \frac{1}{6}$ and $\frac{1}{1} + \frac{1}{4} + \frac{1}{1} + \frac{1}{2} + \frac{1}{1} + \frac{1}{6}$
   (e) $\frac{1}{2} + \frac{1}{3} + \frac{1}{5}$

2. Compute the continued fractions for $\sqrt{5}$ and $\sqrt{23}$.

3. Compute the continued fractions for $\sqrt{n^2 + 1}$ and $\sqrt{n^2 + n}$ where $n$ is an arbitrary positive integer.