NAME: (print!) _____

E-MAIL ADDRESS: (print!) _____

1. Convert the $\frac{27}{23}$ into a simple continued fraction.

2. Find a representation in the form $a + b\sqrt{Q}$ for rational numbers a and b and positive integer Q, for the following infinite, ultimately periodic, continued fractions x.

$$x = [3, 1, 2, 1, 2, 1, 2, 1, 2, \dots \quad] \quad ,$$

where $1, 2$ repeat for ever.