1014-11-1396   **Anne L Chmura*** (`einna4882@yahoo.com`), 238 Cherry Lane, Seven Hills, OH 44131, and **Sally A Hall** (`sally.a.hall@gmail.com`), Swarthmore College, 500 College Ave, Swarthmore, PA 19081. *Units in* $\mathbb{Q}[z, \sqrt{z^2 - 4v}]$.

The sequence of Fibonacci numbers first arose in the study of population growth. However, it is now known to be connected to many natural problems. Both the Fibonacci sequence and the related Lucas sequence play an important role in number theory. These sequences can be generalized to form other sequences of numbers and sequences of Polynomials which have similar properties to the Fibonacci and Lucas sequences of numbers. One interesting fact that inspired this project is that a natural number n is a Fibonacci number if and only if $5n2 \pm 4$ is equal to a perfect square. Also, when this occurs, the square root of the perfect square is the corresponding Lucas number. In order to find out if the Fibonacci and Lucas polynomials are the only solutions to similar a Diophantine equation we need to know the units of certain extensions of polynomial rings. In this presentation we will summarize how we came to determine the units of these particular extensions. (Received September 28, 2005)