109 Spring 2011 - Division Algorithm

Exercise. Find the greatest common divisor of 2047 and 1633 and find integers m and n such that

$$460 = 2047m + 1633n.$$

Exercise (IV.7)**.** Recall the definition of the Fibonacci sequence (5.4.2):

$$u_1 = 1 \qquad u_2 = 1 \qquad u_{k+1} = u_k + u_{k-1} \text{ for all } k \geq 1$$

Prove that for all $n \in \mathbb{Z}^+$, $\gcd(u_{n+1}, u_n) = 1$.