Set 2 - Homework

Name:

Theorem. *Let a, b be positive integers. Then* $\gcd(a, b)$ *is the smallest positive integer g that can be written as $g = ax + by$ for some integers x and y.*

(1) Verify that the theorem above is true for $(a, b) = (6, 10)$.

(2) Explain why the gcd of any two consecutive Fibonacci numbers is 1.

(3) Suppose that a number a has exactly 3 divisors. Show that a must be the square of a prime number.