MATH 115, SUMMER 2012
WORKSHEET FOR LECTURE 25

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(1) Prove that if $p > 3$ is prime, then there are no positive integers x, y, n such that
$$p^n = x^3 + y^3$$
[Hint: Use descent on n by showing that if n works, so does $n - 3$. Also, factor!]

(2) (Warm-up for tomorrow's lecture) Find all rational solutions to the equation $x^2 - y^2 = 1$ using the geometric method from last thursday's lecture.