Quizz #1

Due Friday 4 october in recitation.

Problems:

1. Prove that for every integer $n$, $n^2 - n$ is divisible by 2.
2. Prove that there is no prime integer $p > 2$ such that $p^2 + 1$ is also prime.
3. Find all the integers $1 \leq x \leq 20$ such that $gcd(x, 15) = 5$.
4. Find all the integer solutions of the equation $8m + 6n = 2$.
5. Deduce all the congruence classes mod 6 solutions of $8x \equiv 2 \mod 6$. 
