## Homework 1 (Due Tues, Jan 28)

Math 2710 - Spring 2014
Professor Hohn

Using the proof techniques we have learned in class, prove or give a counterexample to each statement.

1. Let $a$ and $b$ be real numbers. Prove that if $a b=0$, then $a=0$ or $b=0$.
2. $\forall x \in \mathbb{R},\left(x^{2}+5 x+7>0\right)$. (Note that $\forall$ means "for all." The statement reads, "For all $x$ in the real numbers, $\left.\left(x^{2}+5 x+7>0\right) . "\right)$
3. If $m$ and $n$ are integers with $m n$ odd, then $m$ and $n$ are odd.
