Bridge to Higher Math
D Term 2011
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In-Class Worksheet

For each of the following, re-state the problem rigorously using quantifiers and then write a full proof, using the definitions given in class.

1. If m and n are even integers, then $m + n$ is even.
2. If m and n are even integers, then mn is even.
3. Whenever m and n are odd integers, $m + n$ is an even integer.
4. Provided m and n are odd integers, we have that mn is also odd.
5. If m is an even integer and n is an odd integer, then $m + n$ is odd.
6. The product, mn, is an even integer if m is an even integer and n is an odd integer.