Math 3325 In-Class Activity 1 Spring 2006

Time: 15 minutes.
One volunteer from each group will present the group’s findings.

The variable name $x$ stands for an arbitrary natural number. Prove or disprove:

**Problem 1** If $x$ is not odd, then $x^2$ is not odd.

**Problem 2** If $x^2$ is not odd, then $x$ is not odd.

**Problem 3** If $x^2$ is odd, then $x$ is odd.

**Problem 4** If $x$ is divisible by 7, then $x^2$ is divisible by 7.

**Problem 5** If $x$ is not divisible by 7, then $x^2$ is not divisible by 7.

**Problem 6** If $x^2$ is divisible by 7, then $x$ is divisible by 7.

**Problem 7** If $x^2$ is not divisible by 7, then $x$ is not divisible by 7.

**Problem 8** If $x^2$ is divisible by 12, then $x$ is divisible by 12.

**Problem 9** If $x^2$ is not divisible by 12, then $x$ is not divisible by 12.