Math 2001 Assignment 16

October 1, 2014

Problem 1. Scheinerman, §6, #2.

Problem 2. Scheinerman, §6, #10.

Problem 3. Scheinerman, §6, #11.

Problem 4. Scheinerman, §6, #13.

Problem 5. Explain why proving $\forall\, x \in \mathbb{Z},\ P(x)$ is equivalent to proving *both* of the following two statements:

$$\forall\, x \in \mathbb{Z}, (x \leq 0 \implies P(x))$$
$$\forall\, x \in \mathbb{Z}, (x \geq 1 \implies P(x))$$

Problem 6. Prove that 100 is not divisible by 3.