Mathematics 300

Quiz 5

Name: _____Key_____

1. Use the roster method to specify the elements in the following set and then write a sentence in English describing the set.

$$S = \{x \in \mathbb{Z} : x^2 < 2\}.$$

(a) The roster form of S is _____$\{-1, 0, 1\}$_____

(b) An English sentence describing the set is:

The set of integers whose square is less than 2.

2. Use set builder notation to describe the following set

$$S = \{1, 4, 9, 16, 25, \ldots\}.$$

$S =$ _____$\{n^2 : n \in \mathbb{N}\}$_____

3. Use set builder notation to describe the set A of all integers strictly between 17 and 42.

$A =$ _____$\{x \in \mathbb{Z} : 17 < x < 42\}$_____