M317 sec 2   Assignment #1   due monday

1. Prove that the product of two rational numbers is rational.

2. Prove that the product of a rational number and an irrational number is irrational.

3. Is the product of two irrational numbers rational or irrational?

4. Prove that if x has a nonrepeating decimal representation, then x must be irrational.

5. Give an example of a real number x whose decimal representation has a repeating block of length 5 and convert this to the quotient of two integers.