

# Math 300 Writing Assignment 2

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1. An irrational number is a real number that cannot be expressed as a ratio of integers, such as a fraction.
2. If  $x$  and  $y$  are real numbers, with  $x$  less than  $y$ , then there exists a rational number  $r$  such that  $x$  is less than  $r$  and  $r$  is less than  $y$ .
3. Pure mathematics topics often turn out to have applications, such as number theory in cryptography.
4. The function  $f$  is differentiable everywhere.
5. A real number greater than or equal to 0 is nonnegative.