Ma 236 Introduction to Mathematical Reasoning

Homework 12

Due in class April 24, 2017

For any sequence σ of 0's and 1's, $\sigma\sigma$ is the sequence obtained by writing σ twice. If $\sigma = 0110$, then $\sigma\sigma = 01100110$.

1. Estimate the Kolmogorov complexity of $\sigma\sigma$ in terms of $|\sigma|$, the length of σ.

2. Is $\sigma\sigma$ incompressible? Why or why not?