

MTH 320: Homework 6

The following are due on Wednesday, February 20:

§3.1:

1. Construct a Cantor set C_2 by removing the middle half each time instead of just the middle third. What dimension does C_2 have, using an argument similar to the table on page 78? (You should not choose to multiply by 3 this time, but instead by a number tailored to this Cantor set.) Argue that this set is uncountable like we did in class.
2. Prove C_2 does not contain any open intervals (a, b) .