

# Math 504: Set Theory, Spring 2005

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Name:

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What is your goal in graduate school? If a Ph.D., do you know in what area?

What is your goal in taking this course?

What upper division mathematics and philosophy (logic) courses have you had?

The goal of this course is to prove: The continuum hypothesis is both consistent and independent.

What do think each of the phrases: continuum hypothesis, consistent, independent mean?

For each the following notions, write A if you are very familiar with it, B if you have a vague idea and C if the word is completely unfamiliar. State a definition or the theorem if it you are unsure between A and B.

ZFC

ordinal number

the compactness theorem or the completeness theorem (in logic)

regular cardinal

Rewrite in English:  $(\exists x)(\exists y)x \neq y$

$\forall x[(x \in z) \leftrightarrow x \in y \vee x \in z]$

ZFC