Exam 2 Study Guide

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Phil of Math

- Thursday, December 21, **9:00 am**, in our usual classroom. Note: this is one hour after the official listed starting time of the exam. Thus we will only have the room until 11. So please show up on-time.
- Closed-book, closed notes
- Worth 40% of your course grade

This exam will cover all the material in the second half of the class, starting with our discussion of formalism. Thus the exam will *not* be cumulative.

The format will be a mixture of true/false or fill-in-the-blank type questions, on the one hand, and short-answer/short essay on the other.

It will stress understanding rather than memorization. For example, you don't need to memorize, word-for-word, the arguments or theories on the handouts. However, it is important that you be familiar with those arguments and theories; you need to understand the main lines of thought that were discussed in class.

Here are some examples of the types of questions I might ask:

- True or false: "Game formalists think that statements of arithmetic (such as '$2 + 2 = 4$') are true"?
- True or false: "Intuitionists accept the law of the excluded middle"?
- One-word answer: who thinks that our beliefs about mathematical objects are analogous to perceptual beliefs?
- Short answer: what does Gödel's first incompleteness theorem say?
- Short answer: what are impure mathematical objects?
- Short essay: what is Quine's idea of the "web of belief"? How does this idea help with the justification of mathematical beliefs?

To prepare for the exam, the handouts (which are on the website) will be useful. They mention the main theories, arguments, and concepts we discussed. But simply memorizing the handouts probably won't be enough. If you don't have good class notes, you should find someone who does.