Exam Introduction to the Philosophy of Mathematics
February 17, 2010
18.30 hours

	Name:
PLEASE FILL IN	Student nr.
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AND TURN THIS SHEET	MSc Programme:
IN AS WELL	University:

YOU CAN GET THE QUESTIONS BY MAIL IF YOU WANT.

1. What was Aristotle's answer to the two central questions in the philosophy of mathematics? (10 points)
2. Explain the difference between "actual infinity" and potential infinity". (5 points)
3. Explain that for an intuitionist non-non-A not necessarily implies A. (5 points)
4. Galilei brought about a change in the attitude with respect to mathematics. This led, for example, to the work of Descartes and Spinoza in whose philosophies mathematics plays a central role. What change was this and what is the role of mathematics in the views of Galilei, Descartes and Spinoza? (15 points)
5. Why is in Hilbert's structuralism the problem of consistency so important? How did Hilbert try to solve it? (10 points)
6. Describe the role that according to Lakoff and Nunez image schema's and aspect schema's play in the development of an embodied logic and an embodied mathematics. (10 points)
7. How is it according to Lakoff and Nunez possible that we can discuss actually infinite sets although we possess a finite mind? (10 points)
8. What is the essence of Lakatos' fallibilistic philosophy of mathematics? Give an example that supports his view. (15 points)
9. Try to describe the introduction of the calculus by Leibniz as the result of one or more conceptual metaphors. (10 points)
10. Is it possible to be a platonist in the philosophy of mathematics and at the same time accept the ideas of Lakoff and Nunez? (10 points)

Grade = (Total number of points)/10