Philosophy 405: Knowledge, Truth and Mathematics Hamilton College
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Reading Guide #11 - Gödel's Platonism

Gödel - What is Cantor's Continuum Problem? (1964)

1. How does Gödel argue for Hume's principle?
2. What is Cantor's continuum hypothesis? What is the generalized continuum hypothesis?
3. How does Gödel criticize the intuitionists' approach to the continuum hypothesis?
4. Are the set-theoretic paradoxes a problem for solving the continuum problem? Explain.
5. Describe Gödel's pure concept of set (see fn 14).
6. How does the concept of sets as things, "Dividing the totality of all existing things into two categories" (259) lead to contradiction? How does Gödel's concept of set avoid the paradoxes?
7. What are the three possibilities regarding the continuum hypothesis? Which does Gödel think is the most promising?
8. What would the undecidability of the continuum hypothesis by the standard axioms of set theory show?
9. Are the axioms of set theory complete? Explain.
10. How are success and fruitfulness criteria for mathematical truth? What does Gödel mean by 'success'?
11. What role in the development of new axioms does Gödel predict the continuum problem will play?
12. How has the question of the status of the parallel postulate lost its meaning? How, according to Gödel, is the question of the size of the continuum different?
13. In what sense do we perceive the objects of set theory?
14. What is mathematical intuition? Does it give immediate knowledge of mathematical objects?
15. How is fruitfulness a merely probable criterion of truth for mathematics?