

Philosophy of Mathematics – Essay 3 (Formalism and Hilbert’s program)

Readings:

- (!) **Shapiro, S.**, *Thinking About Mathematics*, Oxford University Press (2000), **chapter 6** (‘Formalism’).
- (!) **Hilbert, D.**, ‘**On the infinite**’, in B&P.
- (!) **Von Neumann, J.**, ‘**The formalist Foundations of Mathematics**’, in B&P.
- Curry, H., ‘Remarks on the definition and nature of mathematics’, in B&P.
- Kreisler, G., ‘Hilbert’s Program’, in B&P.
- Detlefsen, M., *Hilbert's Program*, Dordrecht (1986).

Essay Questions: Several different views are often grouped under the heading of ‘formalism’. What are the main views and what is the common idea uniting them? Focusing especially on Hilbert’s view, what is the formalist attitude towards infinities? What are the implications of Gödel’s incompleteness theorems to the view? Can some version of formalism be maintained in spite of Gödel’s theorems?