

Philosophy of Mathematics – Essay 7
(Structuralism)

Required readings:

- (!) Shapiro, S., *Thinking About Mathematics*, OUP (2000), **chapter 10**, ('Structuralism').
- (!) Resnik, M., '[Mathematics as a science of patterns](#)', *Nous* 15 (1981), pp. 229-50.
- (!) Benacerraf, P., 'What numbers could not be', in B&P.
- (!) Parsons, C., 'The structural view of Mathematical Objects', *Synthese* 84 (1990), pp. 303-46. (Reprinted in Hart (ed.) *The Philosophy of Mathematics*, OUP (1996).
- Hellman, G., 'There varieties of mathematical structuralism', *Philosophia Mathematica* 9 (2001), pp. 184-211.

Essay Questions: What is structuralism about mathematics? How does structuralism fit into the division of positions into Realist, Anti-realist (namely: those that take mathematics objects to exist but be mind dependent), and Nominalist? How do the worries in Benacerraf's paper help motivate structuralism? What is the difference between different versions of structuralism? What are some problems that structuralism faces, and is the view ultimately defensible?