

We study spectra of first-order sentences. After providing some interesting examples of spectra we show that the class of spectra is closed under some simple set-theoretic and algebraic operations. We then define a new class of definable operations generalizing the earlier constructions. Our main result is that the class of these operations is, in a suitable technical sense, closed under a form of iteration. This in conjunction with Cobham's characterisation of **FP** offers a new proof of Fagin's theorem and also of the Jones-Selman characterisation of spectra as **NE** sets.