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Finitely arithmetically fixed elements of a field

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We call an element r of a field L "finitely arithmetically fixed (f.a.f.)" if there exists a non-empty finite subset A of L containing r, such that any map f from A to L, which "behaves like a homomorphism" on A, leaves r fixed.

Recently A. Tyszka showed that the f.a.f. elements of the field of real (or p-adic) numbers are just the algebraic ones.

We generalize the notion of f.a.f. to relative extensions and present several results, which also yield an alternative proof of Tyszka's theorem.