(Co-)lax idempotent pseudomonads and Kan pseudomonads

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Abstract. We introduce a description of a (co-)lax idempotent pseudomonad in terms of Kan extensions. We will call these psudomonads Kan pseudomonads. We will see that the usual description of a (co-)lax pseudomonad is essentially the same as the description given in terms of Kan extensions. We introduce the algebras for a Kan pseudomonad also in terms of Kan extensions, and we will see that the usual notion of algebras, in terms of adjunctions, is equivalent to the notion of algebras given in terms of Kan extensions. We conclude presenting the description that one obtains, in terms of Kan extensions, of a distributive law between a co-lax idempotent pseudomonad and a lax idempotent pseudomonad.