



Daniel GRUBB (grubb@math.niu.edu), Department of Mathematical Sciences, Northern Illinois University, DeKalb, IL 60115, USA *Quasi-measures and Quasi-linear maps.*

ABSTRACT. A map $\rho : C(X) \rightarrow C(Y)$ between spaces of continuous functions is called quasi-linear if it is linear on each singly generated subalgebra of $C(X)$. The definition of a quasi-linear functional is similar. We show that the collection of all bounded quasi-linear functionals on $C(X)$ has a Banach space dual which can be made into an ordered Banach space. In general, this space is not a lattice, however. We next look at the structure of positive quasi-linear maps which leads to the concept of a generalized image transformation. A structure theorem is given in terms of a universal space for quasi-linear maps. Several non-trivial examples will be given and methods of computation involving quasi-measures will be presented.