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Oleksandra V Beznosova and Temitope E Ode* (temitope_ode@baylor.edu), 1825 South 3rd Street, APT 1206, Waco, TX 76706. Mutual estimates for the dyadic Reverse Hölder and Muckenhoupt constants for the dyadically doubling weights.

Muckenhoupt and Reverse Hölder classes of weights play an important role in harmonic analysis, PDE's and quasiconformal mappings. In 1974 Coifman and Fefferman showed that a weight belongs to a Muckenhoupt class A_p for some p if and only if it belongs to a Reverse Hölder class RH_q for some q. In 2009 Vasyunin found the exact dependence between p, q and the corresponding characteristic of the weight. The result of Coifman and Fefferman works for the dyadic classes of weights under an additional assumption that the weights are dyadically doubling. We extend the Vasyunin's result to the dyadic Reverse Hölder and Muckenhoupt classes and obtain the dependence between p, q, the doubling constant and the corresponding characteristic of the weight. We obtain our results using the method of Bellman functions. (Received February 09, 2014)