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C. W. Groetsch* (charles.groetsch@citadel.edu), School of Science and Mathematics, The Citadel, Charleston, SC 29409-6420. *Fixed Points and Free Throws*.

P.J. Nahin (*When Least is Best*, Princeton University Press, 2004, pp. 158-171) applies Halley's gunnery rule to minimal-energy, nothing-but-net free throws. For low velocity trajectories, as in basketball free throws, linear resistance is a reasonable model. We derive analogs of Halley's results for a linearly resisting medium. The analysis relies on implicit relationships connected with a simple fixed point problem and leads to a computable characterization of the launch angle leading to a minimal energy shot. (Received July 31, 2008)