1125-M5-147 **Eleftherios Gkioulekas*** (eleftherios.gkioulekas@utrgv.edu), University of Texas Rio Grande Valley, School of Mathematical and Statistical Scienc, 1201 West University Drive, Edinburg, TX 78539-2999. *On the denesting of nested square roots.*

We present the basic theory of denesting nested square roots, from an elementary point of view, suitable for lower-level coursework. Necessary and sufficient conditions are given for direct denesting, where the nested expression is rewritten as a sum of square roots of rational numbers, and for indirect denesting, where the nested expression is rewritten as a sum of fourth-order roots of rational numbers. The theory is illustrated with several solved examples. The proofs are simple, given in a formal and complete style, and can serve as excellent examples for introducing concepts of proof in lower-level coursework, such as proof by contradiction, proof by cases, and quantified statements. (Received August 04, 2016)