Generating a new formula as an exact facsimile of a version of the Newton Raphson Iteration Formula

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Abstract— ***In this paper we provide two methods targeting the square root of a number. The first method is obtained via a very simple, neat and elegant derivation approach. The theme and elegance of the derivation emanate simply from a rearrangement of the function in question into another equivalent form and an associated trivially simple identity. It deserves to be noted, however, that the derivation process neither involves nor refers to any function derivatives. Despite the unique style and methodology employed in the development and derivation process, the final formula obtained turns out to be an exact facsimile of the Classical Newton Raphson Iteration Formula – the wheel is re-invented !! The second method – claimed new, unless shown otherwise - is obtained via applying the Newton Raphson to a function equivalent to the function in hand.***

Keywords—**Newton Raphson, Iteration Formula, Function, convergence, Elementary Simplification.**