1014-33-210   **Dante V. Manna*** (`dmanna@math.tulane.edu`), Department of Mathematics, Tulane University, 6823 St. Charles Ave., New Orleans, LA 70118. *Rational Landen Transformations on* $\mathbb{R}$.

The Landen transformation $(a, b) \to ((a+b)/2, \sqrt{ab})$ preserves the value of an elliptic integral and its iteration produces the classical arithmetic-geometric mean $\mathrm{AGM}(a, b)$. We present analogous transformations for rational functions integrated over the whole real line. (Received August 22, 2005)