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Adam Day, Rod Downey and Linda Brown Westrick* (westrick@uconn.edu). *Turing-, tt -, and m -reductions for functions in the Baire hierarchy.* Preliminary report.

For arbitrary functions $f : [0, 1] \rightarrow \mathbb{R}$, (including in particular highly discontinuous functions), what would be the right notion of Turing reducibility and its variants? We present a computationally motivated definition of \leq_T , \leq_{tt} , and \leq_m for such functions, and show that within the Baire hierarchy, the linearly ordered \leq_T -equivalence classes correspond precisely to the proper Baire classes. Further, within the Baire 1 functions, the \leq_{tt} and \leq_m equivalence classes enjoy a natural correspondence with levels of the α rank on Baire 1 functions considered in Kechris and Louveau (1990). (Received March 19, 2017)