INFORMAL REMARKS ON THE ORBIT STRUCTURE OF DISCRETE APPROXIMATIONS TO CHAOTIC MAPS

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ABSTRACT. We report the results of some computer experiments on the orbit structure of the discrete maps on a finite set which arise when an expanding map of the circle is iterated "naively" on the computer. We also comment on what mathematical questions ought to be answered in order to account for the reliability in practice of orbit following on the computer as an indicator of the ergodic properties of the underlying map.