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**M.Tip E Phaovibul\*** (mtphaovibul@yahoo.com), M.Tip Phaovibul, Department of Mathematics, 1409 W Green st, Urbana, IL 61801. *The distribution of the number of Farey fraction in residue classes.* Preliminary report.

Consider a sequence  $\{\Phi(n)\}_n$  modulo  $m$  where  $\Phi(n)$  is the number of Farey fraction level  $n$ . By extensive computation, we observe that if  $m$  is an odd number then the sequence seems to be equally distributed in all residue classes, moreover if  $m$  is even then the sequence is equally distributed in all odd residue classes. However, we are only able to show that for every residue class modulo 3, we have a positive proportion and similarly for every odd residue class modulo 4. We will discuss why our method succeeds for these two modules, and cannot be applied to other residue classes. (Received September 22, 2010)