962-13-1108 **Carrie E Finch*** (cefinc@ship.edu), Dept. of Mathematics and Computer Science, Shippensburg University, 1871 Old Main Drive, Shippensburg, PA 17257, **Lenny K Jones** (lkjone@ship.edu), Dept. of Mathematics and Computer Science, Shippensburg University, 1871 Old Main Drive, Shippensburg, PA 17257, and **Michael D Seyfried** (mdseyf@ship.edu), Dept. of Mathematics and Computer Science, Shippensburg University, 1871 Old Main Drive, Shippensburg, PA 17257. *Iteration of Quadratic Functions in $\mathbb{Z}_n$.* Preliminary report.

For the function f and the positive integer m, let f^m denote the m-th iterate of f. The authors investigate the following problems:

1. For which positive integers $n \geq 2$ does there exist a quadratic function f such that $\{f^m(x)|m = 1, \ldots, n\} = \mathbb{Z}_n$ for some $x \in \mathbb{Z}_n$?

2. For a quadratic function f satisfying the conditions of 1., which iterations of f are equivalent to a linear function?

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