

PERIODIC POINTS OF SOME ALGEBRAIC MAPS*

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Abstract. We study the local dynamics of maps $f(z) = -z - \sum_{n=1}^{\infty} \alpha_n z^{n+1}$, where $f(z)$ is an irreducible branch of the algebraic curve

$$z + w + \sum_{i+j=n} a_{ij} z^i w^j = 0.$$

We show that the center and cyclicity problems have simple solutions when n is odd. For the case of even n some partial results are obtained.

Key words. discrete dynamical systems, polynomial maps, periodic points

AMS subject classifications. 37F10, 58F, 13P

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