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**Title:** An algorithm determining cycles of polynomial mappings in integral domains

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In the first part of this paper we show how all normalized cycles could be found in a domain  $R$ , provided all nontrivial solutions in units of  $u + v = 1$  and  $u + v + w = 1$  are given. Then we give an effective method to find all normalized cycles in the ring of integers  $Z_K$  in any algebraic number field  $K$ . Finally, we deal with polynomial orbits.

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