

**Komeda, Jiryo**

**On the existence of Weierstrass points whose first non-gaps are five.** (English) Zbl 0770.30038  
Manuscr. Math. 76, No. 2, 193-211 (1992).

Let  $H$  be a cofinite subsemigroup of the additive semigroup  $\mathbb{N}$ , with  $a$ , the least member of  $H$ . The author shows that, if  $a = 5$ , there exists a compact Riemann surface  $X$  and a point  $P$  on  $X$ , such that  $H$  is the semigroup of non-gaps at  $P$ . In an earlier paper [J. Reine Angew. Math. 341, 68-86 (1983; Zbl 0498.30053)] the author had developed algebraic criteria for the existence of curves with prescribed non-gaps. There the related problem for  $a = 4$  was solved and here some extensions are given which enable the case  $a = 5$  to be solved.

Reviewer: C.Maclachlan (Aberdeen)

**MSC:**

**30F10** Compact Riemann surfaces and uniformization  
**14H55** Riemann surfaces; Weierstrass points; gap sequences

Cited in **1** Review  
Cited in **8** Documents

**Keywords:**

Weierstrass points; algebraic curve; gaps

**Full Text:** [DOI](#) [EuDML](#)

**References:**

- [1] Buchweitz, R.-O.: On Zariski's criterion for equisingularity and non-smoothable monomial curves. Preprint, 1980
- [2] Herzog, J.: Generators and relations of abelian semigroups and semigroup rings, Manuscr. Math.3, 175-193 (1970) · Zbl 0211.33801 · doi:10.1007/BF01273309
- [3] Komeda, J.: On the existence of Weierstrass points with a certain semigroup generated by 4 elements. Tsukuba J. Math.6, 237-270 (1982) · Zbl 0546.14011
- [4] Komeda, J.: On Weierstrass points whose first non-gaps are four. J. reine angew. Math.341, 68-86 (1983) · Zbl 0498.30053 · doi:10.1515/crll.1983.341.68
- [5] Maclachlan, C.: Weierstrass points on compact Riemann surfaces. J. London Math. Soc.3, 722-724 (1971) · Zbl 0212.42402 · doi:10.1112/jlms/s2-3.4.722

This reference list is based on information provided by the publisher or from digital mathematics libraries. Its items are heuristically matched to zbMATH identifiers and may contain data conversion errors. It attempts to reflect the references listed in the original paper as accurately as possible without claiming the completeness or perfect precision of the matching.