1047-03-29   **Vinicius Cifu Lopes*** (`vinicius@alumni.illinois.edu`). *The Grothendieck semiring of the group of complex roots of unity.*

We focus on the category of definable sets and functions in the group of complex roots of unity. We define and present its Grothendieck semiring, which is isomorphic to the semiring of nonnegative polynomials over the integers. This is the same semiring for vector spaces over any division ring; however, contrarily to the latter case, the universal Euler characteristic for this category does not enjoy the Fubini property; more strongly, the category itself does not enjoy definable triviality. (This material is part of the speaker's doctoral thesis under supervision of Lou van den Dries.) (Received December 06, 2008)