1096-03-765 **Kai Maeda*** (kai.maeda@oist.jp). *Degree spectra of rack.* Preliminary report.

The theory of racks is a relatively new subject in algebra, which has origins in knot theory and has strong connections with group theory. H. Conway and G. Wraith were first to study "wracks," which were later termed "racks" by R. Fenn and C. Rouke. A rack is a structure Q with a single binary operation $*$ satisfying the following two axioms:

(1) For every x, y, z, we have $(x * y) * z = (x * z) * (y * z)$, and

(2) For every x and y, there is a unique z such that $z * x = y$.

The operation $*$ is not necessarily associative nor commutative. We study computability theoretic properties of racks. The Turing degree spectrum of a rack Q is the set of all Turing degrees of isomorphic copies of Q. We investigate when these degree spectra are upper cones in the upper semilattice of the Turing degrees. (Received September 10, 2013)