

1038-19-232

Charles A Weibel* (weibel@math.rutgers.edu), Math Department, Rutgers University, New Brunswick, NJ 08903, and **Guillermo Cortinas**, **Christian Haesemeyer** and **Mark E Walker**.
Formulas for $NK_(R)$ for \mathbb{Q} -algebras.*

If R is commutative ring containing the rational numbers \mathbb{Q} , we give a formula for $NK_n(R) = K_n(R[t])/K_n(R)$ in terms of Hochschild homology of R and the cohomology of Kähler differentials Ω^i for the cdh topology.

The answer is graded by the layers of the λ -decomposition in K-theory. Each layer is a countably infinite direct sum of copies of a typical piece. If $i < n$, the typical piece for layer i is a Hochschild homology group of R ; if $i > n + 1$, the typical piece for layer i is the $(i - n - 1)$ th cdh cohomology of Ω^{i-1} .

As a consequence, we show that $K_n(R) = K_n(R[t_1, t_2])$ holds if and only if $K_n(R) = K_n(R[t])$ and $K_{n-1}(R) = K_{n-1}(R[t])$. This will be used by Mark Walker in his talk about a question of Bass. (Received February 11, 2008)