

1052-05-64

Ae Ja Yee (yee@math.psu.edu), McAllister Bldg, University Park, PA 16802, and **Kagan Kursungoz*** (kursun@math.psu.edu), McAllister Bldg, University Park, PA 16802. *Alternating Permutations and k th Descents*. Preliminary report.

Yee and Huber (2009) gave new q -analogs of Euler's tangent and secant numbers using alternating permutations and half descents. In this talk, half descents will be generalized to k th descents. Generating functions involving both k th descents and inversions on certain class of permutations will be given. Proofs will be sketched as time allows. This is Joint work with Ae Ja Yee (Penn State). (Received August 29, 2009)