

1084-05-51

George E Andrews* (gea1@psu.edu), 306 McAllister Bldg., Mathematics Department,
Pennsylvania State University, University Park, PA 16802. *From the Shanks acceleration method to
partitions.*

In 1955, D. Shanks published a paper entitled, Nonlinear transformations of divergent and slowly convergent sequences. His object was to accelerate convergence. Surprisingly this method yielded several explicit identities relevant to classical q-series identities including a new proof of Euler's pentagonal number theorem. Recently M. Merca and I (J. Comb. Th., Ser. A, 119(2012),1639-1643) found a surprising relationship between Shanks's work and partition-theoretic interpretations of truncations of Euler's recurrence for $p(n)$. A historical account of this study will be given along with open problems. (Received August 14, 2012)