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Clemency J Montelle* (c.montelle@math.canterbury.ac.nz), Department of Mathematics,
University of Canterbury, Private Bag 4800, Christchurch, New Zealand. “*The Net of Numbers*”:
Combinatorics in Ancient India
Engaging Early Examples for Contemporary Classrooms.

Most undergraduate introductory mathematics courses include some examination of sequences, permutations, and combinatorics. Indeed, their study was considered essential by early Indian mathematicians because of their vital practical application in everyday life. Such mathematical results were of direct importance to the study of prosody, music, garland making, pharmacology and architecture, to name a few. As a result, Indian mathematical treatises are rich with vibrant worked examples which are instantly engaging to a modern audience, not only on account of their practical inspiration and the historical insight they offer, but also because of the mathematical ingenuity displayed when solving such problems. A range of examples and the ingenious ways in which they were solved will be discussed in this presentation, taken chiefly from Bhāskara II’s 12th-century work, the *Līlāvati* and Nārāyaṇa Paṇḍita’s 14th-century work, the *Gaṇitakaumudī*, the relevant section of which is called “the net of numbers”. (Received September 19, 2007)