

1116-Q5-1420      **Sayonita Ghosh Hajra\*** ([sayonita@math.utah.edu](mailto:sayonita@math.utah.edu)), 155 S. 1400 E., Salt Lake City, UT 84112, and **Victoria Kofman**. *Assessing mental math knowledge of prospective elementary pre-service teachers.*

One of the Standards for Mathematical Practice of Common Core State Standards is “Make sense of problems and persevere in solving them.” This requires students to ‘plan a solution pathway.’ We studied pretests from 17 prospective pre-service elementary teachers enrolled in a mathematics course at a western public university in the United States of America. The goal was to estimate their abilities to ‘plan a solution pathway’ when solving one-step number problems with positive integers. Our findings suggest most of the pre-service teachers, before taking required mathematics courses towards certification/ licensure, do not look for alternative strategies. Instead, they use standard column approaches when presented with one-step number problems, which can be solved by using the ideas of mental math. We found although some pre-service teachers knew about mental math strategies, their knowledge was below the level of application. Also, we observed that many pre-service teachers do not internalize the idea of place value and, as a result, cannot transfer their mental math knowledge towards larger numbers. We will discuss how we can improve mental math strategies of pre-service teachers by applying a developed remediation approach adapted to the needs of university level students. (Received September 20, 2015)