

# PROBLEM OF THE MONTH

## NOVEMBER/DECEMBER 2011

### REMAINDER OF A POLYNOMIAL

Let  $p(x) = x^{2011} + x^{1783} - 3x^{1707} + 2x^{341} + 3x^2 - 3$ .

Without using a calculator or computer, find the remainder when  $p(x)$  is divided by  $x^3 - x$ . Show all work on this problem.

For contest rules and prize information see the Problem of the Month display on the first floor. Copies of problems are available in the student lounge on the third floor. Contact Dr. Kaczowski (kaczks@math.sc.edu) or Brett Barwick (barwicjb@mailbox.sc.edu) for more details.

Solutions due in LC 411 by December 9<sup>th</sup>.