1106-C1-76 **Diana S Cheng*** (dcheng@towson.edu), Towson University, Department of Mathematics, 8000 York Road, Towson, MD 21252, and **Nicole Horner**. *Letter Number Substitution Problems for Mathematics Education Majors.*

We show how a letter-number substitution arithmetic problem, "FOUR + ONE = FIVE," in which letters are substituted with digits, can be used with mathematics education students to help them learn about codes in cryptology. Each distinct letter represents a different single-digit number from 0 to 9. A letter standing for the digit zero never starts a number. Each letter represents the face value of the number and is written in the number's place value – for instance, FOUR represents the number computed by F*1000 + O*100 + U*10 + R*1. The Common Core State Standards for Mathematics – both the Standards for Mathematical Practice and Content Standards – which this problem can address will be described. Three algorithms to find the total number of all solutions for this problem will be presented. These algorithms were implemented using programmed Excel spreadsheets. The efficiencies, benefits and drawbacks of these algorithms will be discussed. (Received June 30, 2014)