

Problem 6: Sum Words

Consider the sum

$$\begin{array}{r} \text{M A J O R} \\ +\text{M I N O R} \\ \hline \text{R E S U M E} \end{array}$$

where each letter in the equation represents a digit in base 10, with distinct letters representing distinct digits. What is the largest number that the word **RESUME** can represent and still have the equation true?

As always, show your work, fully explain and justify your answer. A solution mainly obtained by computers or calculators will not be accepted.

Posting Date 3/30/2020. Submit solutions to Noah Aydin, Mathematics Department, RBH 319 (e-mail or hard-copy, but hard copy submissions must include a time stamp) by noon on 4/11/2020.