This week we have a more challenging alphametic for you:

In the addition problem below, each letter stands for a different digit. However, each letter stands for the same digit in every place where it appears. Find the only possible value for each digit to make a correct addition statement:

$$
\begin{array}{ccccccc}
 & D & O & U & B & L & E \\
 & D & O & U & B & L & E \\
+ & & & & T & O & I & L \\
\hline
 & T & R & O & U & B & L & E \\
\end{array}
$$

Of course, this problem is an homage to a line from *MacBeth*, which was written by Shakespeare. So how about we include my favorite Shakespearean sonnet:

My mistress' eyes are nothing like the sun;
Coral is far more red than her lips' red;
If snow be white, why then her breasts are dun;
If hairs be wires, black wires grow on her head.
I have seen roses damask'd, red and white,
But no such roses see I in her cheeks;
And in some perfumes is there more delight
Than in the breath that from my mistress reeks.
I love to hear her speak, yet well I know
That music hath a far more pleasing sound;
I grant I never saw a goddess go;
My mistress, when she walks, treads on the ground:

And yet, by heaven, I think my love as rare
As any she belied with false compare.

Gets me every time. Now get to work on that problem! When you've solved it, be sure to follow the directions on the back of this page $\Longrightarrow$

*Solutions are due to Jason Rosenhouse by 5:00 on Friday, October 17. **Solutions should be written on an official POTW handout, on the back of this page.** Place your name, e-mail address, and the section numbers and professors of any math courses you are taking, in the **upper right corner** of the front of the page. One weekly winner will receive a five-dollar gift card from Starbucks. Please make sure that the answer to the problem is displayed clearly and prominently, in a box when appropriate. **Keep in mind, however, that to be considered correct, your answer to the problem must be accompanied by a clear, concise explanation.** Problems are available at the bulletin board outside Roop 119, and also at the website:*

http://educ.jmu.edu/~rosenhjd/POTW/Fall14/homepage.html