
Problem of the Week
Number Eight
October 27, 2014

We have a fairly challenging problem for you this week, so let's get right to it:

Using the digits from 1–9 exactly once each, what are the two numbers which multiply to give the largest possible product?

To clarify what is intended, one possible solution would be to form the numbers 6,572 and 89,431. This is not the correct answer, however, since it is possible to make two numbers that have a greater product.

Keep in mind that your answer must come accompanied with a reasonable explanation for how you know your answer is correct. POTW will be taking next week off, so this one will have to hold you for a while!

*Solutions are due to Jason Rosenhouse by 5:00 on Friday, October 31. **Solutions should be written on an official POTW handout, in the space below.** 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. Problems are available at the bulletin board outside Roop 119, and also at the website:*

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