Problem of the Week
Number Seven
March 21, 2016

It has been occasionally said that a math teacher is someone who talks in someone else's sleep. So how about a few jokes in which the students get their revenge?

A pollster approaches a college student and asks, "If you had only one hour left to live, how would you choose to spend it?" "That's easy," the student replies. "I'd like to spend it in a math lecture." The pollster is shocked. "Why would you want to do that?" he asks. The student smiles and says, "Because it would seem to me to last forever."

A student is browsing in a curio shop when a man walks in and says to the owner, "I'm the chief environmental officer for this city. The town is plagued with rats. I have tried everything to clean it up, but without success. Then someone suggested that you might have an answer. I'll pay good money if you can help. The shop owner replies, "As it happens, I do have something." He rummages under the counter and picks up a small mechanical rat. "Just wind this thing up, point it toward the river, and let it go. It will cost you one hundred dollars, though." The environmental officer is suspicious, but, desperate for a solution, he pays the money. He goes outside and follows the shop owner's instructions. The mechanical rat takes off toward the river, making loud rat noises. Suddenly, from all over the town, thousands of rats come out of hiding and join the little toy. The rats follow it into the river and drown. The amazed student witnessed all of this. After overcoming the shock he approaches the owner and slaps some money down on the counter. He says, "Here's a hundred bucks. Do you have a tiny mechanical calculus teacher?"

Here's this week's problem:

The product of two positive integers is 9984. The greatest common divisor of the two integers is equal to the difference between the two integers. Find the sum of the two integers.

When you think you have the problem figured out, follow the instructions below.

*Submissions are due to Jason Rosenhouse by 5:00 on **Friday, March 25**. Solutions should be written on the back of an official POTW handout. 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. Solutions will be posted at this website, by the Monday after the problem is due:*

http://educ.jmu.edu/∼rosenhjd/POTW/Spring15.html