
Problem of the Week

Number Nine

April 4, 2016

Academic politics are always good for a few laughs, right?

Four friends—a doctor, a lawyer, a gardener, and a university administrator—meet in a bar. After a few drinks, they start arguing about whose profession is the oldest. Unable to resolve it on their own, they decide to consult the Bible. The doctor says, “Well, it’s clear now. Mine is the oldest profession. Right at the beginning we see that God took one of Adam’s ribs and used it to create Eve. That required some fine surgery, so there must have been a doctor around to perform it. The gardener disagreed. He said, “No, Adam live in the Garden of Eden, paradise. Only a gardener can keep a garden tidy and beautiful.” “I’m afraid you’re both wrong,” says the lawyer. “Even before the garden, God made order out of chaos. You cannot do that and have everything run smoothly according to the laws of nature without a lawyer. So mine is plainly the oldest profession.” At which point the university administrator said, “Pardon me, but who do you think created the chaos?”

The new dean is holding a party in his backyard, to which every faculty member has been invited. After lots of food and drink, the dean gathers all his guests around the pool and says, “Thank you for coming. You’ve all been assuring me that you will support my every decision

and help me run the deanly business smoothly and efficiently. But words are cheap, so show me by deed if you really mean what you say. There is a man-eating shark in this pool. A true supporter is expected to have the courage to jump in this water and swim across, risking life and limb for his dean. The person who does that can ask me any favor, and I will grant it unconditionally.” At first the guests back slowly away from the pool. Suddenly there is a loud splash, and one faculty member is seen swimming furiously. The man beats the shark by a fraction of a second and pulls himself out of the pool. “Incredible!” the dean exclaims to the man. “You have shown loyalty beyond words, so what would you like in return? A raise? Immediate tenure? A five-year sabbatical? Choose, and it shall be done.” Shivering from the cold and with his suit soaking wet, the man replies, “None of that. Just tell me which one of my colleagues pushed me in to the water.”

Here’s this week’s problem:

A faulty car odometer proceeds from digit 3 to digit 5, always skipping the digit 4, regardless of the position. (That is, it skips 4 regardless of whether the 4 is in the units digit, the tens digit, the hundreds digit, and so on.) For example, after traveling one mile the odometer changes from 39 to 50. If the odometer now reads 2016, how many miles has the car actually traveled?

When you think you have the problem figured out, follow the instructions on the other side of the page \implies

*Submissions are due to Jason Rosenhouse by 5:00 on **Friday, April 8**. Solutions should be written on the back of an official POTW hand-out. 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>