Problem of the Week
Number Five
October 3, 2016

From Lewis Carroll, a philosophical discussion about clocks:

Which is best, a clock that is right only once a year, or a clock that is right twice every day?

"The latter," you reply, "unquestionably." Very good, reader, now attend.

I have two clocks: one doesn't go at all, and the other loses a minute a day: which would you prefer. "The losing one," you answer, "without a doubt." Now observe: the one which loses a minute a day has to lose twelve hours, or seven hundred and twenty minutes, before it is right again, consequently it is only right once in two years, whereas the other is evidently right as often as the time it points to comes round, which happens twice a day.

So you've contradicted yourself once.

"Ah, but" you say, "what's the use of its being right twice a day if I can't tell when the time comes?"

Why, suppose the clock points to eight o'clock, don't you see that the clock is right AT eight o'clock? Consequently when eight o'clock comes round your clock is right.

"Yes, I see that," you reply.

Very good, then you've contradicted yourself twice. Now get out of the difficulty as best you can, and don't contradict yourself again if you can help it.

Very deep. Here's this week's problem:

A man looks at a twelve-hour clock and sees that the minute and hour hands perfectly coincide. He did not realize, however, that on this clock the two hands rotated in opposite directions. If we assume that the correct time was between 4:00 and 5:00, and that the two hands started together at noon, then what is the correct time? You should round your answer to the nearest minute.

Think you have it figured out? Then follow these instructions to the letter:

*Submissions are due to Jason Rosenhouse by 5:00 on **Friday, October 7**. 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. Please include a brief explanation of your answer. 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