

The MC Problem of the Week

I think anyone who has ever taught math has been asked the following question: "When are we ever going to use this stuff?" The answer I give is usually something like this: "Are you kidding me? Mathematics is the study of number, form, and change. You don't think you need any of that stuff?" What I leave unsaid is that learning mathematics in no way enables you to solve every problem you might face involving those three things. Take, for example, my trip to see my parents over break.

For the first time in many years, the trip to see my family was not a direct drive up I-75. The shortest route lay through West Virginia. We decided to explore some of the state by taking rural highways up to the Ohio border. Now, I haven't spent much time in West Virginia, and, given my history of navigation, I thought it best to purchase a good road map. It turns out we didn't need it. At least until we passed the third sign informing us we were in Pennsylvania. Well, the map proved to be worth its rather hefty price. We got back to Ohio and on to my folks. There was just one problem, and here is what I mean about mastering skills requiring mathematics. The map was one of those which, by some complicated and mysterious process, can be folded back into a nice, tidy flat rectangle. I'm not one to give up easily, but I will tell you that the map now sits under the passenger seat of my car in a shape that, but for all the crumpling, more closely resembles a sphere than a nice, tidy, flat rectangle. The map did come with a guide to help the spatially challenged like me. The guide gives a diagram in the form of a grid showing the order in which different sections of the map should be (top to bottom) when folded back correctly:

<i>1</i>	<i>8</i>	<i>7</i>	<i>4</i>
2	3	6	5

Is it even possible to fold a map in this way? If it is, can you help me fold the map correctly? If it isn't, will you explain clearly, and in a way a jury can understand, (I'm thinking of bringing a civil suit for the mental anguish this has caused) why it can't?

Any suggestions will, of course, be appreciated. But if you can provide me with the solution, I will be happy to buy you lunch at a place so renowned for its delicious food that no one needs to unfold a map to find it: The Emory Deli.