

# Story 4. Dropping Trou



DAVID DOWNHILL WILLIAMS ACCARDI

Edward Burger: exposed on  
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Before reading on, remember that truth is sometimes stranger than fiction. The highlight of Professor Burger's April 1993 talk to more than 300 Williams College students and their parents occurred when, after removing his shoes, he tied his feet together with a stout rope, leaped onto the table, dramatically removed his belt, unzipped his zipper, and dropped his pants. The purple cows (Williams mascots) mooing about on his baggy boxer shorts completed an image not soon forgotten in the annals of mathematical talks. The more conservative parents in the audience were contemplating transferring their sons and daughters to a less "progressive" school.

But then, at the moment of maximum shock and bewilderment, Professor Burger performed the seemingly impossible feat of rehabilitating his fast-sinking reputation. Without removing the rope attached to his feet, he turned his pants inside out and pulled his trousers back to their accustomed position (though now inside out). Thus he simultaneously restored his modesty and his credibility by demonstrating the mathematical triumph of reversing his pants without removing the rope that was tying his feet together.

Please attempt to duplicate Professor Burger's amazing feat—in the privacy of your room, of course. You will need a rope or cord about 5 feet long. One end of the rope should be tied snugly around one ankle and the other end tied equally snugly about the other ankle. Now, without removing the rope, try to take your pants off, turn them inside out, and put them back on so that you, the rope, and your pants are all exactly as they were at the start, with the exception of your pants being inside out. While some may find this experiment intriguing, others may find it in poor taste. Everyone will agree, however, that surprising outcomes arise when we bend and contort objects and space.

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## Nudges:

- We hope that you physically attempt this exercise. By actually trying a task on your own, it's often possible to discover insights that otherwise may have been hidden from view (particularly in this case).
- You will notice that the rope does restrict the amount of movement of your pants. Your mission is to discover means to work around such constraints. For example, try moving parts of the pants through other parts. You may first want to try this task wearing shorts rather than long pants.