

Myth Busters, Inc.
"Bunk Detectors and Demystifiers!"

February 19, 2008

Independent Mathematical Contractors, Inc.
104 Pinkerton
Tacoma, WA 98402

Dear IMC:

We at Myth Busters pride ourselves in determining the truth regarding old wives tales and solving unique conundrums. Our viewers are a loyal and discerning group; we take great pains to answer all queries. Recently we were asked about the existence of a so-called *unpaintable can of paint*. As it was explained to us, such an object holds a finite volume of paint but there is no amount of paint that could cover its exterior. So the burning question around the Myth Busters' set today is, "Is it possible for a 3-dimensional object to have finite volume but infinite surface area?"

Because of your unwavering dedication to mathematical correctness, we here at Myth Busters know that you can satisfactorily determine if there is a grain of truth to this mythical object. We have been told by a reliable source that the first steps in such an investigation would be to consider the curve $y=1/x$ for $x>1$ and rotate it about the x -axis. But unlike the writing staff of the *Simpsons* and *Futurama*, our creative staff has little to no training in advanced mathematics.

Now that the Hollywood writer's strike has been settled, we hope to address this question in an episode slated for production in mid-March. To that end, please complete a technical report detailing your findings. Be sure to thoroughly explain your methods and conclusions—understanding that we want the complete truth digested for the mathematically uninitiated. We have contracted with Dr. Jennifer Quinn to keep us up-to-date on your progress. She may also be an excellent source of direction and inspiration. Please present your preliminary finding by February 29 and final report on March 7.

Sincerely,

Ms.Teri Solved
Executive Producer, *Myth Busters, Inc.*