Of Mathematicians and Economists

A group of academics were traveling by train to an important international conference. In the last car there was one small party of mathematicians and one small party of economists. Each economist had a ticket, but there was only one ticket for all of the mathematicians.

"How are all of you going to travel to the conference on only one ticket" asked the leader of the economists.

"Oh, we have a method," replied his mathematical colleague.

Shortly before the conductor entered the car, all of the mathematicians went into the same toilet. The conductor collected a ticket from each economist and then knocked on the toilet door. The door opened slightly and a hand poked out with a ticket. The conductor collected it and left.

When the mathematicians returned to their seats, the chief economist said. "Ah, very clever. This is yet another mathematical method that we economists can apply."

About a week later the two parties found themselves in the same train car making the return trip. This time the chief economist had only one ticket for all his party, but the mathematicians had none.

"How are all of you going to ride back with no tickets," asked the economist.

"Oh, we have a method," replied the mathematician.

Shortly before the conductor entered the car, all of the mathematicians went to the toilet. Then all of the economists went to the other toilet. Then one mathematician came out of his toilet and knocked on the door of the other toilet. The door opened slightly and a hand poked out with a ticket. The mathematician collected it and returned to his toilet.

Moral: It is not a good idea to apply mathematical methods without understanding the ideas behind them.

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This is a good story to relate to a class after someone has misapplied a theorem, method or operation. With a class, I recommend following it up with an explanation like this:

In this story the one-ticket trick worked only as long as no one else knew about it and needed a ticket. Unlike the mathematicians, the economists did not understand the necessity of these two domain conditions, and consequently the operation failed for them. (They lost their ticket to the mathematicians.)

This joke was related to me by my son Ben.