

# Pedro's Paradox

Here is an apparent paradox I first heard in 1974. At the time it seemed that there was no answer so the puzzle was forgotten for about 20 years. Then one day it was rediscovered and I set about solving it. Read carefully and give it some time.

## Who Paid?

Pedro lived in a small house on the border of two countries, Garcia and Marcia. These countries had enjoyed peaceful relations for many years. There were no customs at the border, people could travel freely between them and significantly one Garcian Dollar had the same value as one Marcian Dollar. However things changed as a result of a silly squabble between the two. Garcia decreed that within its borders, a Marcian Dollar would be worth only ninety Garcian cents. Marcia retaliated, so one Garcian Dollar equalled ninety Marcian cents in Marcia.

One morning Pedro discovered that he was out of razor blades. (He lived before the days of disposables!) Not only that, but also his beloved razor had broken too. He decided to start his shopping in Garcia, so he set off with ten Garcian Dollars in his pocket. In Garcia he approached a shopkeeper and asked for a razor. "One Garcian Dollar" he was told. He handed over his ten Garcian Dollar note and was given a new razor and a ten Marcian Dollar note for his change. This was correct, as it was worth only nine Garcian Dollars.

Pedro still needed to buy some blades for his razor, so he decided it would be best if he did that in Marcia. Without going home first, he set off with his new razor and the ten Marcian Dollars he received in Garcia. When he arrived, the shopkeeper was selling razor blades for one Marcian Dollar. Paying with his ten Marcian Dollar note, he received his blades and a ten Garcian Dollar note, worth nine Marcian Dollars.

## The paradox?

"Enough shopping for one day", thought Pedro as he returned home. Tired but happy, he had bought what he wanted, but had ten Garcian Dollars in his pocket just as when he started. Who paid for his purchases?