Study: Math often confuses consumers

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U.S. scientists have determined two plus two might not always equal four -- especially when consumers are confronted with percentages.

Professor Akshay Rao of the University of Minnesota and Assistant Professor Haipeng Chen of the University of Miami discovered consumers treat percentages as whole numbers, resulting in systematic errors.

"Numerical quantities such as price or product performance are often expressed in percentage form," said Rao. "But when consumers have to deal with more than one percentage at a time, they make errors that can be costly. For instance, if a store offers a 25 percent off sale with an additional 25 percent off for a certain product, people assume they are getting a 50 percent reduction. In reality, they are getting about a 43 percent discount. On a $100 product, they pay $56.25, not $50.

"This phenomenon becomes even more interesting when a value goes up and then down," he added. "Imagine your stock portfolio went up 40 percent last period, and down 30 percent this period. You are not better off by 10 percent. Your portfolio is down 2 percent."

The study is to appear in a forthcoming issue of the *Journal of Consumer Research*.

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