

TRS 92: Domain and Range

Think Ahead about Percentages and Equations Answers

Two students got together to discuss the problems above. They were surprised to find that they had done the problems differently, but got the same answer. Their solution methods are shown below. Answer the following questions: Would both of the methods always work? If so, explain why they are equivalent. If not, explain why.

3.	Sandy's Solution $45 * .056 = 2.52$ $45 + 2.52 = 47.52$ The cost of the meal is \$47.52	Ambika's Solution $45 (1.056) = 47.52$ The cost of the meal is \$47.52
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Yes, the two methods are equivalent and both would always work. Sandy just calculates the tax first and adds it to the bill. Ambika calculates the total bill all at once. Taking 5.6% of a total then adding that amount to the total is the same as taking 105.6% of the total.

4.	Sandy's Solution $45 * .3 = 13.50$ $45 - 13.50 = 31.50$ The cost of the jeans is \$31.50	Ambika's Solution $45 (0.7) = 31.50$ The cost of the jeans is \$31.50
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Yes, the two methods are equivalent and both would always work. Sandy calculates the 30% off first then subtracts the discount from the original price. Ambika just takes 70% of the original amount to immediately find the new cost. Finding 30% of a total and subtracting that amount from the total is the same as finding 70% of the total.