This is a very good assessment problem for percentage:

(The following actually happened): Recently my wife came home with the receipt displayed below. She informed me that she and her mother went shopping and put their purchases on the same bill. Each person’s purchases are marked on the receipt.

1. Calculate each person’s portion of the entire bill.

*Wife’s is $42.50 and mother-in-law is $11.48*

1. Show why reducing the entire bill by 35% is not the same as first taking off 15% and then another 20% off.

*Total is $73.47 without discount.*

*After 15% off it is $62.45 and the after 20% it comes to 49.96*

*If you take off 35% off the total you get $47.76.*

*The reason for this is if you take off 15% of the total you then have a smaller number you are taking 20% off of next versus taking the entire 35% off a bigger number.*

