MathFLIX CHALLENGE

Successive Discounts

Successive discounts can be confusing. Read the scenarios below and study the table for better understanding.

Maya found a beautiful dress for graduation that had a $40 price tag but she only had $26 to spend. When Maya and her friend Sue went shopping the next week, the beautiful graduation dress was marked down 25%. Did Maya have enough money to buy the dress? ***Yes?*** ***No?***

Sue told Maya not to worry. They would come back next week and hope the dress was marked down another 10%. Just as Sue predicted, the next week the dress was marked down another 10% but Maya still did not have enough money to buy the dress. What was wrong with Sue's calculations?

Sue's calculations	**Store's calculations**
25% + 10% = 35% off of $40 = $14 off	25% off of $40 = $10 or $40 - $10 = $30
Original price $40 – 14 = $26	10% off $30 = $3 or $30 - $3 = $27

Super Discount Chance Store

Each week, Super Discount will take 20% off an item if it is still in the store. Study the calculations of the mathematicians below and see which set of discounts are accurate. How lucky do you feel?

Careless Mathematician **Thoughtful Mathematician**

Week	Cost of Item	Savings	Presumed Discount	Cost of Item	Savings	Effective Discount (Savings/Original Price)
	$100			$100.00		
1	80	$20	20%	80.00	$20.00	20/100 = 20%
2	60	40	40%	64.00	16.00	36/100 =
3				51.20	12.80	48.8/100 =
4						
5	0					

Super Discount Chance Store #2

A competing discount store offered these super discounts: *Week 1* = 5%; *Week 2* = 10%; *Week 3* = 20%; *Week 4* = 40%; *Week 5* = 25%. Which mathematicians calculations are accurate?

Careless Mathematician **Thoughtful Mathematician**

Week/ Discount	Cost of Item	Savings	Presumed Discount	Cost of Item	Savings	Effective Discount (Savings/Original Price)
	$200			$200.00		
1 - 5%	190	$10	5%	190.00	$10.00	10/200 =
2 - 10%		20	15%	171.00	19.00	
3 - 20%					34.20	
4 - 40%					54.72	
5 - 25%	0				20.54	