College Mathematics
applying multipliers

1. The digital camera you want usually sells for $280 at The Neutronics Store. The store is having a sale this month, and every item has been marked down 20% from the usual price. A salesperson mentions that, because today is the last day of the sale, all cameras will be sold for 30% off the marked sale price. If you decide to buy the camera today, how much will you pay for it (excluding sales tax)?

2. A certain store advertises that their merchandise is regularly marked "50% off" the suggested retail price, and they have a sale in which everything is further reduced by 20%. How much are you *saving*, as a percentage of the suggested retail price?

3. A 16% discount followed by a 35% discount is the same as a single _____% discount.

4. Expressly Unlimited is having a sale; their newspaper ad contains a coupon good for 25% off the price of any item in the store. You also received a certificate in the mail which entitles you to a 40% discount off the price of any item in the store. If you decide to apply both toward your purchase of a jacket, should you ask to apply the "25% off" coupon first or your "40% off" certificate first? Why?

5. If each member of a women's weight-lifting team plans to bench-press 12% more in February than she did in January and plans to increase the amount by 9% from February to March, by what percent will each woman increase her bench-press weight from January to March?

6. The Mega-Blob is out of control, draining the Starship Excalibur of its precious store of energy crystals! The Mega-Blob appears to feed on energy crystals and eats once a day. Its intake increased 100% from Sunday to Monday and is expected to increase 100% again from Monday to Tuesday. How much will it eat on Tuesday, as a percentage of what it ate on Sunday?

7. The owner of Clueless Shoe Stores applies a standard mark-up of 15% to every item. Then, when they need to make space for new inventory, they hold a sale in which everything is marked down 15%. That way, they will still break even on the discounted shoes. Right? What-EVer! What percent of the original price *will* the final price be?

8. Bobbie works and lives in Multiply City, where the local sales tax is 8.25%. Bobbie is preparing her income tax return and would like to deduct the sales tax for some car repairs she had done last year. She has a receipt for the work, but unfortunately it only shows the total amount, $1040.01. What was the price, not including sales tax? What was the amount of the tax? (Hint: it is *not* 8.25% of $1040.01)

9. If you eat 25% of a blueberry pie on Monday evening, 25% of the *remaining* part on Tuesday evening, 25% of the *remaining* part on Wednesday evening, and 25% of the *remaining* part on Thursday evening, what part of the pie will be left by Friday morning? (Hint: "none" is *not* the correct answer.)

10. You began working for Pecan Street Software in 2007. Since then, the company has been growing. You received a 7% raise in 2008, a 5% raise in 2009, an 8% raise in 2010, a 14% raise in 2011, and a 17% raise in 2012. Assuming your base salary (in 2007) was $27,000, what is your salary for 2012?