ASK MARILYN®

BY MARILYN VOS SAVANT

The other day I got off from work, bought a six-pack of beer and headed toward a friend's house. Since it was a long, hot walk and I was beat, I drank three beers along the way, figuring I'd have that much less to carry. My friend says I'd still be carrying the same amount of weight, only in a different place. Who's right?

—D. Patmore, St. Petersburg, Fla.

I'd vote for your way of thinking. Does your friend usually feel that when he goes out to dinner, he also has to carry it home afterward? And if he now weighs, say, 16 pounds more than he did in high school, does he feel that he's carrying around a regulation bowling ball everywhere he goes? Regardless, you might want to tell him that he can at least be glad you didn't stop to buy half a dozen bottles of wine instead.

Are bees attracted to artificial sweeteners such as saccharin, cyclamate, aspartame or stevioside?

—T. Miller, Carteret, N.J.

No. Maybe it's because artificial sweeteners are essentially nonnutritive, which is why they don't add calories to foods. So when you're getting ready for your next picnic and think it's time for the bees in the park to go on a diet, you might want to fill your basket with goodies like alitame, thaumatin, chlorosucroses, dihydrochalcones, L-sugars, acesulfame-K, PS-99 and PS-100.

Your "yes" answer to the cafeteria question is right, but there is a flaw in the reasoning.

The question was: "If A eats at a cafeteria twice a week, and A sees B there about 75% of the time, can A assume that B goes there more often than A does?" You replied: "Yes, assuming the same lunch hour and randomly varying days. Say B goes once a week; if A also goes once, A has a 1-in-7 chance of seeing B. Now say B goes twice, and A still goes once; A would double his chance of seeing B to 2-in-7. Now say A goes twice too; his chance of seeing B would double again, to 4-in-7. That's a 57% chance, but A actually sees B about 75% of the time. So because A only goes twice a week, B must go more often than that."

But if both go twice a week, then stating that "A will see B 57% of the time" is incorrect. In fact, the correct answer is 2/7 (28.6%).

—Ram Dahiya, Ph.D., Old Dominion University, Norfolk, Va.

The original reply didn't state, "A will see B 57% of the time." It read, "That's a 57% chance, but you say A sees B about 75% of the time." The reasoning made a different point. The "57% chance" amounts to .57 sightings per week. The "75% of the time" amounts to 1.5 sightings. This next reader explains:

If the total number of times that A sees B divided by the total number of weeks that they go to the cafeteria is 75%, your figures make sense. This quotient, which could be greater than 1, is neither the probability of A seeing B on a given day of visit, nor is it the probability of A seeing B during a given week. It is the *expected value* of the number of times A sees B per week. If both visit twice a week, this expected value of the number of sightings is indeed 4/7 (57%). This is an interesting and powerful concept that can be used for analyzing many situations and is worthy of further exploration.

—David Pollack, Ph.D., Youngstown State University, Youngstown, Ohio

I've noticed that people who have money are not sharing of it, yet people who have little money enjoy spending money on others too. Why are people this way? (Please don't say that the wealthy have money because they don't spend it.)

—L.J. Hamilton, Houston, Tex.

I think you're dead wrong and that it's time to take a closer look at this stereotype. I, too, have paid attention to charitable behavior throughout my life, and I've reached a very different conclusion. That is, I believe that people of *all* economic classes enjoy treating others and giving money away to those less fortunate. Why are people this way? Well, why not? Few wealthy people inherited their money; in fact, the great majority of them began life just like the rest of us. That is, they're the same people—