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The phrase you're three times more likely to write wrong

IF YOU HAVE SOME MONEY to invest and are looking for a professional firm to help you manage it, you probably want someone who can help your money grow but doesn't charge you a lot.

Charles Schwab runs a commercial (<https://www.ispot.tv/ad/Av9V/charles-schwab-not-again?autoplay=1>) that discusses its charges. As a banner unfurls on a building, two brokers for an unnamed firm comment on how low Schwab's fees are.

"That's *three times less than* Fidelity," one says. "And *four times less than* Vanguard," the other says.

Math doesn't work that way. English, however, is another matter.

ICYMI: Headlines editors probably wish they could take back (https://www.cjr.org/the_lower_case/headlines-editors-probably-wish-they-could-take-back.php)

First, the math. If you charge a 9 percent fee, and your rival charges 3 percent, you charge three times what your rival does. Take 3, and add 3 to it twice more, and you get 9.

As long as the numbers are going up, the math works.

But when you go down, you run into problems, mathematically speaking. If you charge 9 percent, your rival cannot charge "three times less" than you do. As *The New York Times Manual of Style and Usage* says, "A quantity can *decrease* only one time [by its own quantity] before disappearing, and then there is nothing left to decrease further." Take 9, and subtract 9 twice more, and you're in negative territory.

When you're dealing with money, you can go below zero, of course, but that's not what the commercial intends: It is (apparently) saying that Schwab charges one-third of what Fidelity does, or one quarter of what Vanguard does. Otherwise, Schwab is paying its clients to manage the money, and that's not a good business model.

We wrote a few years ago

(http://archives.cjr.org/language_corner/times_up.php) that some people believe that "three times more than" means the original quantity multiplied by the "more than" quantity, plus the original quantity. In that interpretation, "three times more than" your 3 percent fee is 12 percent: three times your fee (9 percent) plus the original 3 percent. To avoid that confusion, saying you charge "three times as much as" appeases the mathematical geniuses in your audience.

Most of your readers, though, probably don't fall into that category. As *Merriam-Webster's Dictionary of English Usage* says, "It is, in fact, possible to misunderstand *times more* in this way, but it takes a good deal of effort."

Bryan A. Garner takes a harder line in *Garner's Modern English Usage*, putting "times more than" in the entry on "illogic."

But he comes down even stronger on "times less than." In an "illogic" entry full of pique, he writes that if something is "two times cheaper," it implies "that the store will pay *you* the full price of Brand Y if you will take Brand X home with you. That mangles the meaning of *cost*, and it surely isn't what the writer means."

ICYMI: In defense of The Skimm

(<https://www.cjr.org/criticism/the-skimm-newsletter-critique.php?link>)

Garner uses logic to explain the unacceptability of an illogical phrase in an illogical language. As the Merriam-Webster usage dictionary says, “mathematics and language are two different things: attempting to apply mathematical logic to the study and understanding of language is, in fact, illogical (and usually unproductive into the bargain).”

Trying to use mathematical logic “may therefore seem intimidatingly persuasive to the nonmathematical (among whose ranks we may safely expect to find most usage commentators).” We include ourselves and our previous posting in that category, but we’ve come around.

The phrase “times less” falls into the category of idiom, and idiom is not always logical

(http://archives.cjr.org/language_corner/bizarro_world.php). Even among the mathematically inclined, Jonathan Swift’s 1711 resolution “to drink *10 times less* than before” has not been misunderstood. While that may be among the earliest recorded usages of “times less,” it is not the only one. And even scientists, engineers, and mathematicians who we expect to know better use it (<http://www.prnewswire.com/news-releases/global-pyrometers-market-2017-2021---emergence-of-dual-wavelength-pyrometers---research-and-markets-300471780.html>) frequently (<http://journals.sagepub.com/doi/full/10.1177/0020731416689549>).

Whether you use “times less” comes down to the situation. If you’re dealing with whole numbers that convert easily to recognizable fractions, you can say either that Schwab charges “three times less” than Fidelity does, or, if you must, that it charges “one third” of what Fidelity does. But what happens when you have an article like this one

(<http://www.courierpress.com/story/opinion/2017/06/02/attorney-general-dont-legalize-marijuana/102421690/>), which says that “someone who uses marijuana by age 15 is *3.6 times less likely* to graduate from high

school, *2.3 times less likely* to enroll in college and *3.7 times less likely* to get a college degree”? How do you convert that to a fraction or say it another way?

If you're not a mathematical genius, time's up.

ICYMI: *The New York Times* reporter who tweets like it's going out of style (<https://www.cjr.org/analysis/maggie-haberman-twitter.php?lowercase>)

Merrill Perlman managed copy desks across the newsroom at the *New York Times*, where she worked for twenty-five years. Follow her on Twitter at @meperl (<http://www.twitter.com/meperl>).