If you've used electricity in your life, you're undoubtedly familiar with Thomas Edison, and likely pay your electric bills to a company named in his honor. (And if you're reading this, you're using an electronic device, so you are familiar with Edison. Q.E.D.) You may not, however, be as familiar with a man perhaps even more responsible for the electricity you're using to view this blog post: Nikola Tesla.

Tesla, who apprenticed for Edison, helped to make Edison's Direct Current (DC) electrical transmission more efficient and therefore more marketable, but then, against Edison's conservative wishes, branched out on his own to create an even-more efficient electrical system, Alternating Current (AC). (And, in doing so, gave way to the name for one of history's greatest bands, AC/DC…and whose electrical system did they list first?)

Despite Edison's reluctance (and massive anti-AC public relations campaigns to preserve his technology's profitability), Tesla's AC technology won out, essentially because the AC system was more efficient and more flexible. AC technology allows for changes in voltage without the need of expensive conversion machines, and allows electricity to be transported across longer distances. Essentially, Edison's DC systems were "brute force" systems, whereas Tesla's AC was efficient and adaptable, and in the end efficient-and-adaptable won out in the "War of the Currents," the same way that it will for you on the GMAT. How?

Tesla's great advantage was that he could take electricity and adapt it to the required situation. AC allowed low-power items to receive low levels of power, and for higher-power items to receive the higher levels of required power, all from the same source. Electricity, through Tesla, could adapt to the required situation.

The same is true of GMAT Data Sufficiency questions, and in particular those that feature algebra with multiple variables. These questions often provide you with information in an inconvenient fashion, giving you a choice to be made: do you "brute force" them by plugging in a series of values, or do you attack them efficiently-and-adaptably, fitting the information provided to the situation at hand?

Consider this question:

For integers a, b, and c, a/(b-c) = 1. What is the value of (b-c)/b?

1) a/b = 3/5

2) a and b have no common factors greater than 1

At first glance, Statement 1 seems to require quite a bit of work to be useful, as all of the provided information is in terms of a, and the question at hand only involves b and c. Plugging in values of a, b, and c using the 3:5 ratio between a and b could be extremely time-consuming and frustrating.

However, the information provided in the question and in statement 1 can be fitted nicely to the question:

a/(b-c) = 1

a/b = 3/5

What is (b-c)/b?

Taking the first statement and multiplying both sides by the denominator, we find that:

a = (b-c)

Knowing that, we can simply replace (b-c) in the question with a, since we know that the two quantities are equal:

What is a/b?

At this point, the question asks for exactly what statement 1 provides:

a/b = 3/5

So the first statement is sufficient.

By approaching this one like Tesla, valuing flexibility and using the algebra to fit our assets to the question, we can make quick, efficient work of this statement without much effort.

Statement 2 is not sufficient. Simply knowing that a and b have no common factors greater than 1 does not tell us which is which. Since we're asked for a/b, we'd need to know which value is the numerator and which is the denominator, and the statement does not provide for that. Potential values include:

a = 3, b = 5 (both primes, so they don't have any common factors)

b = 5, a = 3 (the same values, but as no order was specified we could simply invert them)

Accordingly, the correct answer is A, as statement 1 alone, but not statement 2, is sufficient.

Ultimately, the GMAT is a test of how you manage resources and solve problems, and few minds in world history have done that better than Nikola Tesla. Train yourself to think that way, fitting your algebraic assets to the Data Sufficiency question stems, and you'll demonstrate to business schools that you have what it takes to be successful (and to rock bands like AC/DC and Tesla that you know where they're coming from).