

There are big decisions in life, and then there are BIG DECISIONS. You'll make some pretty important decisions on the GMAT, so you should want to consider the methodology of how to best make these choices. And few of those BIG DECISIONS can compete with some of those made by one of the world's most prominent figures of the last century, LBJ. Lyndon Baines Johnson (what, you were expecting *another* LeBron James article today?) in his nearly six years as U.S. President was tasked with some absolutely huge decisions: how to deal with the Vietnam conflict, what to do about the growing need for civil rights reform, how to put a man on the moon... "The Sixties" are remembered as a monumentally revolutionary decade in American and world history, and LBJ presided over the vast majority of it, making big decision after big decision.

How, other than the timely LBJ/LeBron James made-you-look reference, is this relevant to your GMAT studies?

Much like your situation on the [GMAT](#), most of LBJ's was inherited – the questions facing him were not as much part of an agenda of his choosing, but rather issues that were thrust upon him. He took office after the assassination of John F. Kennedy, inheriting the task of bolstering a nation in shock. At the time he took office, the conflict in Vietnam was already underway with thousands of U.S. troops on the ground; Kennedy's guarantee of a man on the moon by the end of the decade had already been made; racial tensions were reaching a head in the aftermath of Brown v. Board of Education and with the evolution of multiple powerful civil rights groups and leaders.

Johnson, like you as a GMAT examinee, had no choice but to answer the questions that faced him. And, like you should on test day, he did so by taking the issues and making them his own, pushing for, among other things, a "Great Society" agenda to leave office better than he found it. On the GMAT, you will undoubtedly face problems that you simply wish not to, but as LBJ found the best way to handle them is to make them your own.

Consider the problem:

$$\&\$ * \$\& = \&@\&$$

In the multiplication problem above, &, \$, and @ represent different, nonzero digits, and the product of & and \$ is less than 10. What is the value of the two-digit number &\$?

- A) 11
- B) 12
- C) 13
- D) 21
- E) 31

Tricky, eh? Like taking office and having to confront civil rights and a growing military conflict all at once...

The keys to these problems are to make them your own by writing down what you know. Here, we can start with a couple quick things that we know to get started:

- 1) We're dealing with unique digits, which means that choice A, 11, isn't a possibility, so at least that's out of the way.
- 2) We're dealing with individual digits, and not numbers, so they're probably testing some kind of number property – and one that we know they test a lot when looking at individual digits in multiplication is a unit's digit property. Stacking the multiplication vertically can help to better gauge that:

$$\&\$$$

$$\$\&$$

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$$\&@\&$$

With the unit's digit rule in mind, we know that multiplying \$ \* & leaves us with &. In other words, multiplying & by \$ keeps it the same. What number, when multiplied, keeps the other the same? 1. So now we know that the \$ is 1, making our problem:

$$\&1$$

$$1\&$$

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$$\&@\&$$

Since the problem is asking for &\$, and we know that \$ is 1, then we also know that choices B and C, which put the 1 in the tens place and not the units, are incorrect. Now we're down to two choices: 21 and 31.

We need to replicate that repeating digit, so it may just make sense to multiply out our options:

$$21 * 12 = 252 \text{ (replicates that repeat)}$$

$$31 * 13 = 403 \text{ (does not replicate the repeat)}$$

So  $21 \times 12$  is the problem that works, and we know that our answer has to end in 1, so it must be 21, or choice D.

Often times, the GMAT will create a uniquely complex situation for you, and your best option is to make decisions by breaking out the complexity into smaller steps of your own. If you can unpack both the things that you know and your GMAT “guiding principles” (like number properties), you can take these complicated situations that you inherit and turn them into logical, systematic decisions.