THE IMPORTANCE OF THE BASICS

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The four basic mathematical operations—addition, subtraction, multiplication and division have application even in the most advanced mathematical theories. Thus, mastering them is one of the keys to progressing in an understanding of Math and, specifically, of Algebra.

Electronic calculators have made these (and other) operations simple to perform, but these devices can also create a dependency that makes really understanding mathematics quite difficult. Calculators can be a handy tool for checking answers, but if you rely too heavily on one, you may deprive yourself of the kind of rigorous mental exercises that will help you not just do math, but to fully understand what you are doing.

In an article posted, Kelly Kilpatrick contributed that fundamentals are building blocks of more advanced math. If you have a firm grasp of the fundamentals of Math, you will be able to learn more advanced mathematical processes far more easily. Having good math skills will ultimately save you time and reduce the need to tutoring or remediation. Additionally, since each process builds upon prior knowledge and successful application of these skills, it is of the utmost importance that the fundamentals are solid.

In the elementary schools, pre-test and posttest on 4Fs are administered using window cards from grades 1-6 in order to identify pupils’ level of mastery on the four fundamental operations and one factor to identify if a student is a numerate or non-numerate.
In the previous years, 4Fs was administered through speed test. Students had to answer addition in 3 minutes, subtraction and multiplication in 4 minutes, and division for 5 minutes. With those allotted time, some of the students would not be able to answer all the items which resulted to low scores and low MPS. Though students had mastery of the basics, they got low scores because some students are slow in answering the test.

This year, 4fs was administered through accuracy test, to assess how many correct answers they will get in a 100-item test in each operation. Based on the pre-test scores, it is higher than the speed test.

So to increase pupils, mastery of the 4Fs, drills must be done everyday using flash cards, window cards and other means. Mastery of the basics would help students to do advanced mathematics.

According to the research by Harvard professor Tom Loveless, there are two quotes that proves why mastery of the basics is essential:

“Basic skills are necessary to advance in Math (Students must learn arithmetic so that they can move on to more demanding mathematics—algebra, geometry, calculus)”

“Basic skills predict adult earnings. ...A growing body of research has documented that the skills and knowledge students learn in school is correlated with success later in life”
References:

