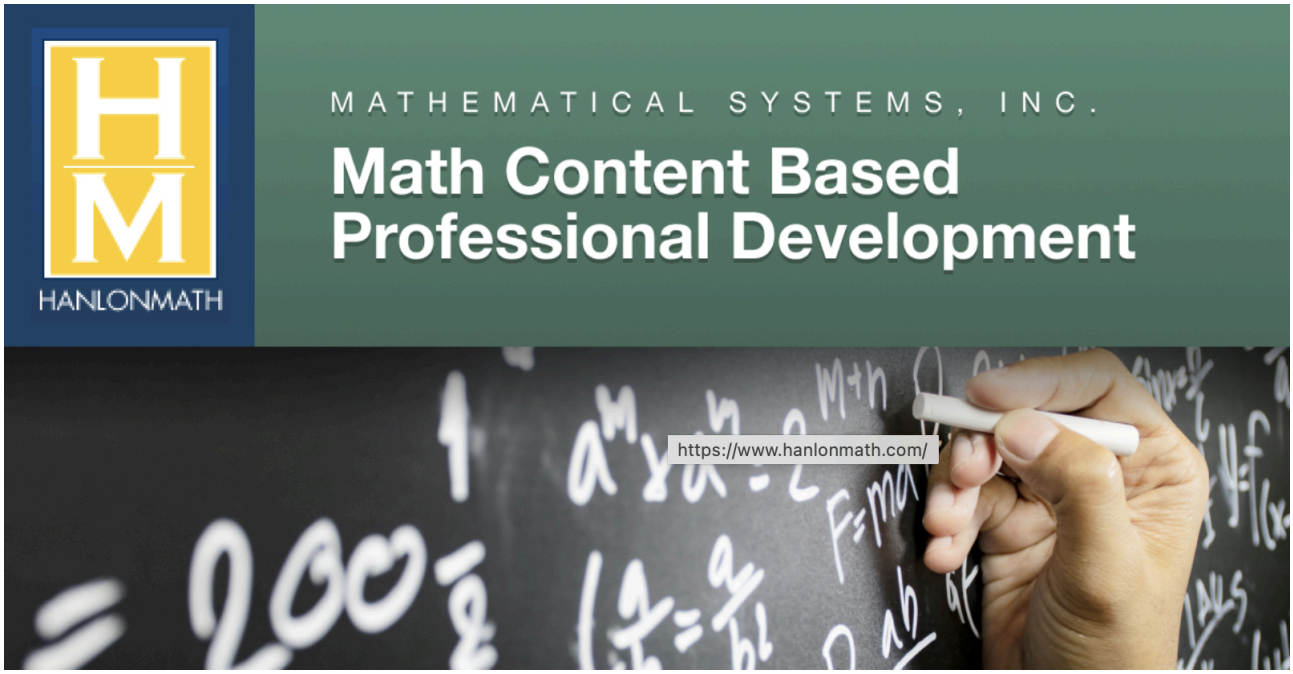

Math Achievement –
Nothing to Boast About

While math achievement is clearly nothing to boast about, there are free strategies we can implement that result in increased proficiency and achievement rates.

I have found one reason so many adults and students don't do well in math is because of their belief systems. Too many think math is hard, that to do well in math you have to be intelligent. That's just not true!

An axiom in math is that the more math you know, the easier it is. A simple example of that is multiplying by a power of ten mentally. You see the pattern, you know the answer.

To get students to believe they can do math, we have to help them regain their confidence. That is, we have to ***build success on success*** with how we teach math.

To do that, teachers and administrators have to understand the greatest differences between math taught in elementary to math taught in secondary schools are vocabulary, notation, and the recognition of patterns that make math so much easier to do.

So, we start by linking concepts or skills to previous learning or outside experiences. That linking provides teachers an opportunity to review and reinforce concepts and skills as they teach their assigned curriculum, it also allows teachers the opportunity to introduce topics in a familiar language which makes students more comfortable.

Second, with initial instruction, we use simple, straightforward examples that work, that clarify and don't distract students with needless arithmetic.
Third, we use repeated scaffolding to reach grade level expectations.
Fourth, we understand the importance of recognizing patterns. Students being able to compare and contrast leads them to make decisions on how to approach math in the easiest way.

The standard algorithms for adding, subtracting, multiplying and dividing in elementary are exactly the same when introduced in algebra, pattern recognition makes them easier to do in algebra mentally.

For instance, when teaching subtraction facts, do we make learning those more difficult by teaching them sequentially, or can we group them by recognizing a pattern?

Many students can learn if you subtract the same number, the difference is zero quite easily. Piece of cake, right?

Let's look at another pattern, when you subtract numbers where the unit digits are ***consecutive numbers***, the answer is always 9 or ends in 9. Examples: 12–3, 13–4, 16–7, etc.

When you subtract numbers where the unit digits are ***consecutive even or odd numbers***, the answer is always 8 or ends in 8. Examples: 12–4, 13–5, 14–6, 15–7, etc. Do we have students try to learn 30 subtraction facts in isolation or learn by recognizing 3 patterns?

To help students regain their confidence in learning and doing math, we need to teach in a way that ***builds success on success****.*

Call 702.218.3875 or contact us today to discuss your needs.