Courtney Koestler challenged a group of parents and teachers at East Elementary to mentally solve a simple problem: what is 70-23?

With eyes turned toward the ceiling, and mouthing their thoughts as they went along, parer worked to visualize and solve the problem without paper, pencil or calculator at hand.

After a moment, parents sheepishly gave their answers. One parent said, “47.” She arrived at her answer by rounding the first number up to 30 and from there added and deducted as needed to get to her answer, which was correct.

But how would a typical elementary-aged child go about solving this problem? Koestler posed the question and showed the group a video of a research project from San Diego displaying a second grader using a simple algorithm and believing 53 to be the right answer, despite proving to herself through blocks and number charts that 47 is the correct answer. In the second grader’s mind, 7-2 equals 5, and 0-3 must equal 3. Therefore, 53 had to be the answer, in her mind.
Koestler, a faculty member from the Patton College of Education at Ohio University, has been working with a couple of groups of K-6 parents and teachers between East Elementary and Morrison-Gordon Elementary schools to help develop a true understanding of math.

“Even if we tell kids there’s multiple ways to do this, like the adult way or the big-kid way, the algorithm becomes the ‘right way’ and they become wedded to that instead of thinking about ‘OK, what makes sense is this situation?’” Koestler said to the group.

About 50 parents throughout the Athens City Schools district indicated interest in the teacher-family book study group, which met three times in a one-month period. Future groups at West Elementary and The Plains Elementary schools are set to start in November and meet through December.

Koestler led the group using the book *Math: Facing an American Phobia* by Marilyn Burns. A mini-grant through the Patton College of Education funded the group and made distribution materials possible.

Math hasn’t been taught well for decades, according to Koestler, and started with the US competing in the Space Race, wanting to turn out more mathematicians and scientists. In the process, math was reduced to getting kids to only compute, and took away the meaning of math, she said.

One way the group served to change kids’ thinking of math was the idea of $100 words, East Elementary teacher Kyle Lonas said during the discussion.

The activity lets kids imagine A’s are worth $1, B’s, $2, and so on. The challenge then lies in adding the values of each letter to produce a word worth $100. One such word is “pumpkin.”

A parent at the meeting said her fifth grade daughter sees math in a different way now having been exposed to activities like the $100 word challenge and now, as a result, feels more excited about the subject.

“The games make it fun for her,” she said.

Although the pendulum has swung different ways in terms of math reform over the years, r
education experts have stressed the need for understanding, Koestler said.

“There's no questioning that kids should be understanding math,” she said. “It shouldn't be memorized, shouldn’t be forced on them. They should be provided opportunities to make sense of it on their own.”

SGUINN@ATHENSMESSENGER.COM; TWITTER @SARAHGMESSENGER