

Is Common Core Math Causing Students to Fall Further Behind?

Every few months it seems that another story pops up concerning some child's confusing Common Core math homework. For examples, check out the three famous ones below:



As authors Katharine Beals and Barry Garelick explain in [The Atlantic](#), homework questions such as these are an attempt to have children understand the concepts behind the math problem instead of relying on rote memorization.

Getting children to understand mathematical concepts behind a problem is certainly a worthy goal. But Beals and Garelick wonder if the tedious nature of such problems *actually discourages students* from understanding and progressing in their math studies.

*“Despite the goal of solving a problem and explaining it in one fell swoop, in many cases observed at the middle school, students solved the problem first and then added the explanation in the required format and rubric. **It was not evident that the process of explanation enhanced problem solving ability.** ...*

In general, there is no more evidence of “understanding” in

the explained solution, even with pictures, than there would be in mathematical solutions presented in a clear and organized way. How do we know, for example, that a student isn't simply repeating an explanation provided by the teacher or the textbook, thus exhibiting mere 'rote learning' rather than 'true understanding' of a problem-solving procedure?"

As Beals and Garelick explain, the mind naturally eliminates the extraneous material of a math problem, leaving only the basic numbers. Causing students to diagram and explain their work frustrates this natural process and fails to “free up working memory.” The authors conclude:

“Thus, requiring explanations beyond the mathematics itself distracts and diverts students away from the convenience and power of abstraction. Mandatory demonstrations of 'mathematical understanding,' in other words, can impede the 'doing' of actual mathematics.”

Viewed in that light, one has to wonder: is the attempt to improve U.S. students' math performance actually doing more harm than good?

Image Credit: Flickr