

Questions Parents Frequently Ask About K–6 Classroom Mathematics Programs

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Second only to reading, mathematics is high on the list of parents' concerns about the education of their children. When parents are concerned, they should ask questions. Below is a list of frequently asked questions and a straight forward answers about mathematics learning. These are only simple answers to the questions—you might want to ask your child's teacher also; he or she may have better answers.

Q: *Aren't you teaching the basic addition, subtraction, and multiplication facts anymore?*

A: Most teachers do teach the facts and believe strongly that they are important. We all need to know the number facts in order to solve problems effectively and efficiently. However, teachers also want students to understand the concepts behind the mathematics skills so they will know which skill to use in which mathematics situation. Teachers try to balance their mathematics study time with equal amounts of skill building, concept understanding, and problem solving—the same combination of mathematics knowledge adults need in their own professions.

Q: *I didn't study all these new concepts when I was in school. Are we abandoning the basics?*

A: Basic skills are very important, but we also need to remember that what was considered "basic" in the past is not necessarily basic today, and won't necessarily be when our students are adults. We must make sure the basic skills we teach today prepare students for their future.

Q: *Why isn't my child doing pages of computation problems?*

A: Your child can demonstrate whether he or she can do a type of problem in 10 or fewer problems. If your child can demonstrate that he/she knows how to do a type of problem, there is no need to do 50 of the same kind. Also, if a student is unable to do a certain type

of problem, then doing 50 more of the same problems incorrectly will not help. Teachers try to balance the time assigned practice problems with concept building and problem solving, to help students think and use mathematics.

Q: *Shouldn't students master the basics before doing problem solving?*

A: Problem solving IS a basic skill. In the past, too many students never learned to solve good problems because they couldn't master a skill such as long division first. Problem solving might just be the most valuable basic skill we can teach our students. They will certainly have problems to solve all of their life!

Q: *Why does my child have to do so much problem solving?*

A: Mathematics is best learned skills in the context of situations that are real and meaningful, not through simple isolated skills. Students can practice and master skills in the context of problem solving situations—by doing problems that intrigue and challenge them. Just as carpenters learn their trade by building things, and musicians learn music by playing instruments, students need to learn mathematics by applying skills and knowledge in problem-solving situations.

Q: *Why is my child allowed to use the calculator? Shouldn't they master the basic skills first?*

A: It is true that students should never use a calculator when they can find the answer faster by using pencil and paper or mental math. However, we need to teach students when paper and pencil, mental math, estimation, or a calculator is the best tool for any given mathematics situation. Learning whether to use a calculator is a basic skill. We need to make sure that students know how to use a calculator correctly since adults use a calculator as a valuable tool in all careers in the real world.

When students no longer have a teacher or parent by their side, they need to know which mathematics tool is best for each problem they face, and how to use it correctly in order to get the right answer—that includes calculators!

Q: *Why does it appear that students are sometimes playing during math time?*

A: Students using blocks, counters or other objects while doing mathematics may appear to be playing. However, the purpose of these hands-on materials is to build a better understanding of mathematics concepts through a direct hand-to-eye-to-brain connection. You wouldn't expect a mechanic to learn to rebuild a carburetor by only reading a book. Physical objects can be very helpful to keep students and adults actively engaged in learning.

Q: *I don't know how to do this math myself. How can I possibly help my child?*

A: As a parent or guardian, you don't need to know all the answers or be a math whiz to help your child study mathematics. You can help best when you show interest and actively support your child's mathematics education. Teachers's assignments usually have clear directions. If you adopt the attitude that you can figure it out together, you'll often find success. Please refer to another article in this series titled, "*Helping with Homework*," for more detailed ways you can assist your child with mathematics assignments.

Q: *Why is my child studying algebra in 3rd grade (or any grade)? I never did.*

A: Algebra is now more important than ever. Algebra as a subject in mathematics has become a gatekeeper—you can't graduate from high school or go to college without it. Because all students must succeed in algebra, the California Standards require all teachers to teach algebra concepts from kindergarten through eighth grade. We believe that more children will be successful in Algebra I if we begin teaching algebra concepts much earlier.

Q: *Isn't it true that some students can do mathematics and some just can't?*

A: In the past we believed this was true, and justified it by saying that not all students needed mathematics. We now know that all students need mathematics and that all

students can learn mathematics. How we teach mathematics is vitally important to making this a reality. Some students learn by simply hearing a new skill or concept, other students need a more visual approach, and many students learn best by making connections through hands-on materials. It is no longer acceptable to have a few students "get math" and the rest fall behind. We need mathematics programs that address all students' needs.

Q: *Isn't it true that some students don't do well in mathematics because they or their parents don't understand or speak English?*

A: Success in mathematics is not dependent on parent education, native language, or economic status. Students from other countries often do well in mathematics because it requires less language. Mathematics can be a great equalizer and help students attain the American dream of success. Today teachers are trained in teaching techniques that make speaking English less of a necessity in mathematics classes.

Q: *Will my child learn less in a mathematics class with students of mixed abilities?*

A: No. Thanks to the Standards, all students must be taught the full complement of necessary mathematics concepts in the areas of Number, Geometry, Algebra, Statistics & Probability, and Problem Solving. Your child will be taught the breadth and depth of topics in mathematics for their grade level. California also requires that skills not be taught in isolation but presented in a context of conceptual understanding and problem solving to help ALL students make powerful connections.

Of course there are many more questions about your children learning mathematics. If you don't find your question here, please contact Paul Giganti at pgiganti@berkeley.edu, and he will do his best to answer your question. 🏠

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