

Report to PARENTS

Dos and Don'ts for Building Deep Math Skills

Though Common Core math problems may look complex, math itself hasn't changed. One plus one is still two. What has shifted is the way schools teach math under many states' new college- and career-readiness standards. To prepare students for an increasingly technical world, many teachers are working to strengthen students' deep math knowledge—how, where, and why math ideas fit together. How can you support that work at home? Here are six dos and don'ts.

Do know how elementary math builds.

As your child progresses from kindergarten into later elementary grades, math concepts will build on one another. For instance, under the Common Core, second graders learn how to break rectangles into two, three, or four equal parts. Third graders learn how to place these fractions on a number line and compare fractions' size. This leads to fourth graders being able to add and subtract fractions and mixed numbers. Teachers call this vertical understanding—knowing how skills build across grade levels. Your child's teacher can explain related learning goals for each grade.

Do focus on mastery, not tricks. To understand new, complex math concepts, students have to leverage ideas and skills they've already learned. Students can't make those connections if we present math as a series of rules or shortcuts. If your child asks for help, talk through assignments, reread textbook passages, or draw a picture together, if possible.

Don't press your child to move too quickly. If pushed through challenging ideas too fast, students can develop gaps of understanding and they won't be prepared to tackle high school math. Have honest conversations with your child's teacher about whether your child is on target, or needs extra help or enrichment.

Don't take the reins. If your child is struggling, it can be tempting to show him or her how to finish a problem. As much as possible, try to coach your child through the assignment. Many teachers are moving away from showing students how to simply compute answers; instead, they place students in small groups to explore challenges. At home, allow your child to put on his or her critical thinking cap.

Do ask extra questions. In the classroom, your child's teacher may ask questions that assess students' reasoning. Mirror



this at home by asking, "How do you know?" and "Do you think that's always true?"

Do make math as fun as possible. Sure, boosting deep math knowledge may feel like serious business. But to build your child's math confidence—which wavers for many students as math gets tougher—celebrate successes. Praise your child for studying hard, arriving at an answer, or tackling a tricky problem for the first time. Play age- and skill-appropriate math games that bring math to life and boost family fun.

Drawn from "Build Deeper Math Foundations" by T. Spencer Jamieson. Principal September/October 2016.

Web Resources

The **Council of the Great City Schools'** grade-specific parent roadmaps outline math learning goals and games to play. www.cgcs.org/page/244

The **National PTA's** Parents' Guide to Success offers FAQs and activities for both math and language arts. bit.ly/2b5kReJ

Search **Be a Learning Hero's** grade-specific guides for math homework help. bealearninghero.org/learning-tools/homework-help/#results

This resource is brought to you in partnership with the Learning First Alliance, a partnership of education organizations representing more than 10 million members dedicated to improving student learning in America's public schools. learningfirst.org.

