

CPM'S POSITION PAPER ON HOMEWORK

Karen Wootton, Director of Curriculum and Assessment

CPM believes that homework is an opportunity for students to individually practice skills and deepen their understanding of concepts. Because of this, CPM authors have taken care to purposefully place each homework problem correctly within the course to support one of CPM's guiding principles, mastery over time. Looking at the homework, headed *Review & Preview* in the text, you will most likely see one or two problems related to the day's topic, a couple problems on topics from a few weeks ago, and a few problems on topics from possibly a few chapters ago. This is called mixed, spaced practice, or interleaving. The research is clear on this: learning is improved when the practice is *spaced* over time, rather than being *massed*, or happening all at once and then left behind. Topics and skills are revisited again and again through the homework. Each time, the questions grow in depth and complexity, topics are presented with different representations, as well as connected to other areas of mathematics.

Homework assignments allow teachers to formatively assess their students' ability to demonstrate mathematical skill, understanding in writing, and growth, as well as the quality of work. The spaced practice of the *Review & Preview* sections allow students to demonstrate growth over time and progress toward mastery. CPM recommends that teachers do not spend time grading every homework assignment for correctness. CPM believes that one of the best ways to prepare to teach a CPM course is to work through all the assigned problems. Teachers who do so create solution sets for homework checking as an added benefit of thorough preparation. Teachers should provide these solutions for students to check their work which allows students to take responsibility for their learning. By reviewing detailed solutions, students can correct any errors, and determine if they need to see the teacher for

additional help or clarification, or to feel confident that they have mastered the concepts and skills. Homework is an opportunity to practice outside of class. Errors are to be expected and not penalized. Every effort should be made to help students understand that homework is for their benefit and to improve learning. Doing homework problems gives students an opportunity to self assess their readiness and preparation for individual assessments.

Because CPM feels that doing homework should support student learning, there are two pieces of information that students, parents, and teachers should all be aware. First, there are only a minimal number of homework problems to do each night. This is purposeful and CPM does not expect teachers to supplement the homework problems with additional worksheets or problems from another source. Students will get the necessary practice through the mixed, spaced practice that continues throughout the year. For example, when students first learn how to factor trinomials, there might be only two problems for homework that night on factoring trinomials. However, over the course of the next several weeks and months, the students will end up doing well over one hundred factoring problems, far more than the "1 - 30 odd" many teachers assign in a more traditional massed approach to homework. Second, CPM provides online Homework Help free to anyone with internet access. Within the eBook, next to each homework problem is a link: [Homework Help](#)  which will take the student to the hints and suggestions for solving the problem. For students who do not have an eBook, all Homework Help can be found by going to CPM.org and selecting the student's text from Textbook Resources then choosing Homework Help from the menu on the left.

Homework Help is designed to support a task that is done outside of the classroom with no teacher oversight or support. The variety of assistance that Homework Help provides is appropriate to the purpose of homework, that is, to practice and deepen understanding. Therefore, students will not find simple answer statements in the Homework Help. Rather, hints, suggestions, and references to previous problems are offered. A student may choose to rapidly click through all the hints, and then copy the answer. (Some problems do not have the answer.) Of course this is not what we would want students to do, but most students use Homework Help as the support it is intended to be. CPM believes it is important to let students know that Homework Help is available, free of charge, and students should use it to help them learn, not to copy answers.

Every school and every district has its own policy on homework and how or if it should be graded. CPM believes it is the school's or district's duty to have a policy on homework and the assessing of it that is readily shared with students, parents, and teachers. CPM believes that homework falls under the heading of formative assessment and should therefore be used accordingly.