Our Problems of the Week (PoWs) provide non-routine problems that encourage the application of mathematical knowledge and the development of mathematical practices. We try to create an environment in which students explore, discuss, communicate about, and revise mathematics. At its most basic level, a “Problem of the Week” is an open-response math problem that can be printed out and handed to the students. But there’s a lot more available in our online environment.

The Life Cycle of a Current Problem of the Week

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<th>Sunday</th>
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<td>Week 0</td>
<td>Teacher Packets: CCSS alignments, “answer check”, model solutions, teaching suggestions, solutions from our archives (novice, apprentice, practitioner, expert). Scenarios: Problem with the question(s) removed, for Notice and Wonder® activity. Scoring Rubrics: Three elements of problem solving (interpretation, strategy, and accuracy) and three of communication (completeness, clarity, and reflection), each with descriptors at four levels (novice, apprentice, practitioner, and expert). Online Resources: Links to similar PoWs, threads from Ask Dr. Math®, tips from our Teacher2Teacher (T2T®) service, and applets from our Math Tools library.</td>
<td>New Problem Previews</td>
<td>Problem Solving and Communication Activity Series: Coherent sequence of activities designed to help students develop and deepen their use of mathematical problem solving. Student activities provided for each of 13 strategies. Example documents provided for 80 of our PoWs.</td>
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<td>Week 1</td>
<td>Problem Opens for Submission Answer Check: After students submit online, they can choose to look at the “answer” we provide, which is often enough to indicate to them whether they have more thinking to do. Our hints and questions help students approach problem solving as a process with a goal of reflecting and revising.</td>
<td>Free Mentoring! During the two-week window in which a PoW is “Current”, student submissions to our Current PoWs are sometimes mentored by college students who are learning to be math teachers. The pre-service teachers love seeing the range of student thinking, and the students enjoy having a college “pen-pal” who wants to hear their math ideas.</td>
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<td>Week 2</td>
<td>Teacher “Office”*: View your students’ work online and see whether or not students view the answer check, revise their work, or leave a comment or question. Mentor your students’ work using our scoring rubric. Encourage perseverance and problem solving as a process with this electronic portfolio system.</td>
<td>See if any of your students’ solutions were featured in the posted solutions to illustrate different problem solving strategies and fun ideas! We add commentary about the different methods students used in their submissions, common mistakes we saw, and anything that was especially cool or exciting.</td>
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<td>Week 3</td>
<td>Problem is No Longer “Current” Students can continue to submit to this problem and revise their work for the remainder of the school year. However, work submitted after a new “Current” problem appears on Monday won’t be considered for possible inclusion in the publicly posted solutions (see Friday).</td>
<td>Commentary and Sample Solutions Posted</td>
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All levels of membership include:

- Access to the six Current Problems of the Week (Primary, Math Fundamentals, Pre-Algebra, Algebra, Geometry, Trig/Calc)
- Register up to 36 students per class (additional classes can be added for $10 per class)
- Students may submit online to the Current PoWs; eligible for free mentoring when available
- Assess your own students’ responses using our online mentoring and feedback system
- Access to teacher resources, including teacher packets, scoring rubrics, scenarios, online resources, and activities from the Problem Solving and Communication Activity Series

For more information about The Math Forum, visit: [http://mathforum.org/](http://mathforum.org/)
Problem of the Week Professional Development Opportunities

These courses reflect best practices in supporting students’ mathematical thinking and communication based on mentoring thousands of students’ problem-solving efforts and carefully researching what helped students reflect, revise, and learn.

Each course is six weeks long and costs $149. You must also purchase a Full PoW Membership (see below). Additionally, our programs can be customized to meet local needs. We seek opportunities for extended collaboration rather than single workshops because of our experience with effective improvement efforts and program implementation that required close collaboration and support over time. For more information, see http://mathforum.org/pd/.

PoW Membership: Resources & Strategies for Effective Implementation
Become familiar with all the resources associated with your membership access. You will be able to make an informed decision about how to start implementing PoWs with your students, and you’ll have an idea of further steps to try when you are ready.

Learning from Student Work: Make the Most of Your PoW Membership
Mentor student work submitted to the Math Forum from classrooms around the world. The goal is for you to become comfortable as well as successful in prompting students to develop sound mathematical practices through written feedback.

Mentor Your Own: Supporting Strong Development of Mathematical Practices
Apply what you’ve learned in the two courses above with your own students and focus on the development of their mathematical thinking and problem solving, individually and collectively.

Developing Powerful Problem Solvers (Powerful Problem Solving Course 1)
Nurturing Powerful Problem Solvers (Powerful Problem Solving Course 2)
Max Ray-Riek, author of Powerful Problem Solving, is leading these professional development courses, making use of the book (which participants must own) and the companion web site (http://mathforum.org/pps/) and its growing collection of classroom videos, student handouts, and resources. Each week will include reading a chapter, watching selected video clips and/or looking at student work, and doing tasks or projects using the skills from that chapter.

Problem of the Week Membership Options

Memberships last approximately one year.

Current PoW Membership (Individual Student) - $15
Access to the six Current Problems of the Week, online submission, eligible for free mentoring when available and for highlighting on our site.

Current PoW Membership (Teacher + One Class) - $25
Access to the six Current Problems of the Week, online submission for up to 36 students, ability to mentor your own students using our online system, access to teacher resources, including activities from the Problem Solving and Communication Activity Series, Teacher Packets, Online Resources, and problem solutions. Additional classes can be added for $10 per class.

Full PoW Membership (Teacher + One Class) – $119 (Primary), $149 (Other Grade Bands)
Same features as the Current PoW membership plus access to all problems in our Library and Write Math (Standards alignments).

School and District Memberships – Prices Based on School Enrollment
Full PoW Memberships for all teachers, plus on-site, online, or phone-based membership orientation and online PD courses at discounted group rates.

Priority Mentoring - $10/Student/Problem with Existing Membership
Our mentors will give students feedback on their initial submissions and any subsequent revisions.

For more information about The Math Forum, visit: http://mathforum.org/