



Art of Problem Solving

10865 Rancho Bernardo Rd Ste 100
San Diego, CA 92127

(858) 675-4555
www.artofproblemsolving.com

April 11, 2018

Sivaram Nair
10706 Rosewood Road Apt 706B
Cupertino, CA 95014

Greetings,

This letter confirms that Venkataram Edavamadathil Sivaram has completed Art of Problem Solving's Introduction to Counting & Probability course. This is a 12-week course covering concepts in counting and probability, including casework, permutations, combinations, distinguishability, expected value, combinatorial identities, and the Binomial Theorem. This course is specifically designed for high-performing students and draws material from many programs for top middle and high school students in the country. Venkataram earned a grade of A+ in this course.

Venkataram did an excellent job counting throughout this course. He did very well in the weekly challenge problems, displaying a strong understanding of the material. Even more impressive were his solutions to the writing problems, which were not only almost always correct, but were also consistently very nicely written and easy to follow. I strongly believe he has the necessary background in counting for a more advanced counting course.

One topic I could notice a slight difficulty with was distinguishability. In the future, I suggest Venkataram keeps the distinguishability of objects in mind more carefully, since this seems to be a more likely source of errors for him in counting problems.

Sincerely,

Luis Ares
Art of Problem Solving
classes@artofproblemsolving.com



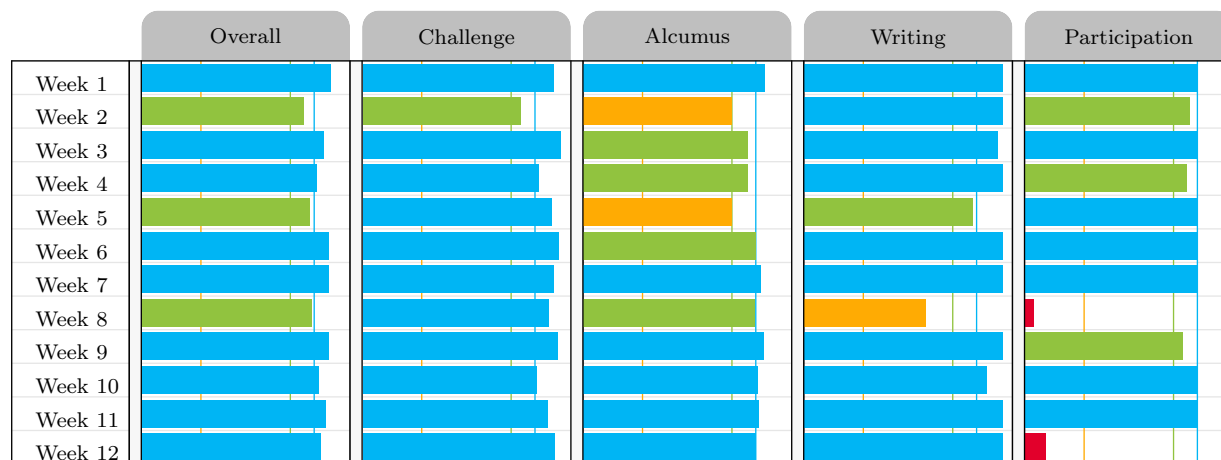


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Student Report



How to Read This Report

Our system for communicating progress to students is based on colors. The green line is the target we set for them, since this is the point where we tell students that they have passed the week's material and are ready to move on. The blue line is the mastery line, and offers an extra challenge to the most motivated students.

Overall: This bar is built by combining the Challenge, Alcumus, Writing, and Participation bars. The length is based 35% on the Challenge Problem score, 20% on the writing problems score, 40% on the Alcumus score, and 5% on the Class Participation score.

Alcumus: This is our online adaptive learning system, which offers students a customized learning experience, adjusting the difficulty of the problems it provides to a particular student based on the student's previous performance.

Challenge: Every week, the student is challenged with 6-12 difficult short-answer problems based on the week's topic. These problems collectively test the student's ability to correctly apply the key concepts of the week. Students are allowed to re-attempt a problem until they answer correctly. The answers are automatically graded by a computer, giving the student instant feedback along with a full solution to each problem.

Writing: Writing Problems require a student to write a full solution in complete sentences, rather than simply provide a numerical answer. Each problem serves as a capstone for the week and provides practice in mathematical writing. Here, the student is expected to articulate their creative, critical, and logical reasoning, and to show any step-by-step computations that lead to





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their final answer or proof. Writing problems are reviewed by our instructional staff, and students receive a grade as well as personalized feedback on both the technical and stylistic aspects of their submission.

Participation: The participation score is generated automatically by monitoring performance during class time.

