

Problem of the Week #25

Assigned: 1300, Thursday 14 APR 11

Due: 1300, Thursday 21 APR 11

The Measuring Rod

Three distances are chosen randomly (with uniform probability density) on the interval (0,1 meter). A 1-meter measuring rod is then cut at the three locations corresponding to these three numbers. What is the probability that a quadrilateral can be formed using the lengths of the resulting four segments? (Note for clarity: the quadrilateral must be formed to have a 1 meter perimeter, i.e., the entire length of each segment must be used.)

Email solutions to Christopher.marks@usma.edu with subject line: POTW.

Solutions can be emailed in the form of: an email (plain text) no attachment, a word document, a mathematica file, an excel workbook, or a scanned adobe file of your work.

If none of these options work for you, you may drop a hardcopy off at my office TH239C, just annotate the time of submission.