1158-97-37 **Peter Tannenbaum*** (`petertannenbaum@gmail.com`), 1318 ANACAPA ST, Santa Barbara, CA 93101. *Polya's "Let us Teach Guessing" Revisited: Shortest Distance Problems.*

Given N random points on the plane, what is the shortest network connecting these points? This is a classic Polya-type question—easy to state but surprisingly deep and multi-layered. In this talk I will borrow from Polya's "teach by guessing" approach to pluck some of the low hanging fruit of this problem: N = 3, and a few special cases for larger values of N. (Received February 11, 2020)