**Abstract:** Probability is the mathematical study of how likely an event occurs or a proposition is true. Representation theory is the study of algebraic structures by realizing their elements as linear maps on vector spaces or modules and decomposing them into their smallest constituents. Both probability and representation theory lend themselves to combinatorial analysis.

In this talk we explore how to exploit combinatorial tools (similar to the 15 puzzle) to answer deep questions in probability and representation theory, in particular those that helped to get mankind to the moon.

For more information:  http://math.dartmouth.edu/activities/kemeny-lectures