1067-Z1-530   **Dale K Hathaway*** (`hathaway@olivet.edu`), Olivet Nazarene University, Department of Mathematics, One Unviersity Avenue, Bourbonnais, IL 60914, and **Mark J Lockwood** (`mlockwo1@live.olivet.edu`), Olivet Nazarene University, ONU box 7579, One University Avenue, Bourbonnais, IL 60914. *Probabilistic Pentominos and other Polyforms.*

Typically polyforms are examined a size at a time as with pentominos. But what if they are constructed recursively by starting with a square and attaching another square to one of the edges of the initial square where the location of the new square was determined probabilistically. Continuing this process we can construct polyforms of any size. This process associates a probability with each figure. Relationships between the probabilities and the figures will be examined. This idea will also be extended to figures that start with equilateral triangles, hexagons, and even cubes in three dimensions. This talk is based on the work done in a summer research experience by the second author under the direction of the first author. (Received September 08, 2010)