

962-B1-773

Thomas E. Price* (teprice@uakron.edu), Department of Mathematics, The University of Akron, Akron, OH 44325-4002, and **Adam E. Roberts** (aer@uakron.edu). *Fractal Tilings with Radial Symmetry*. Preliminary report.

Let $m > 1$ be an integer and let $\{v_j\}_{j=1}^m$ denote the collection of two-dimensional vectors composed of the $m - 1$ roots of unity and the zero vector. Then a fractal attractor can be generated using the iterated function system

$$f_j(z) = v_j + \begin{bmatrix} \alpha & -\beta \\ \beta & \alpha \end{bmatrix} \begin{bmatrix} x_1 \\ x_2 \end{bmatrix}, \quad j = 1, 2, \dots, m$$

where $\alpha^2 + \beta^2 = 1/m$, $\alpha, \beta \in \mathbb{R}$. This talk will address the problem of determining conditions on α, β and m so that these attractors generate tilings of the plane. (Received September 26, 2000)