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**Judith A. Palagallo\*** (palagallo@uakron.edu), Department of Mathematics, University of Akron, Akron, OH 44325-4002, and **Matthew C. Palmer** (cade\_3@hotmail.com). *Irregular Sierpinski Triangles*. Preliminary report.

An irregular Sierpinski triangle, with subtriangles that are not congruent, can be generated with transformations of the form  $f_i(x) = M_i x + \mu_i$ , where  $M_i$  is a  $2 \times 2$  matrix and  $i = 1, 2, 3$ . Under certain conditions, a change of basis matrix  $B_i$  can be found so that  $h_i = B_i M_i B_i^{-1}$  is a similarity transformation and is represented by a matrix of the form  $\begin{bmatrix} \alpha_i & -\beta_i \\ \beta_i & \alpha_i \end{bmatrix}$ . The self-similar attractor  $A$  of the iterated function system  $\{h_i(x) + B_i \mu_i, i = 1, 2, 3\}$  has a fractal dimension that is easily calculated. However, to calculate the fractal dimension of the original irregular Sierpinski triangle, we introduce the string metric and associate the irregular triangle with the self-similar attractor  $A$ . (Received September 25, 2000)