1056-C1-1955　　　　**Ann Robertson*** (`arob@conncoll.edu`), Connecticut College, Box 5378, 270 Mohegan Avenue, New London, CT 06320. *A Feigenbaum Face.*

Examples of the Golden Mean abound in nature; the human face is frequently offered as a further illustration of its use. Can one imagine different constants being present in a face, perhaps a stylized one? Just for fun, the Feigenbaum delta and alpha constants of chaos theory were considered. The first constant, discovered in 1975 by Mitchell Feigenbaum, is approximately equal to 4.6692. For a period doubling bifurcation diagram, of say the logistic map, it is the limiting ratio of successive interval lengths given the onset of mathematical chaos. The second Feigenbaum constant, approximately equal to 2.5029, is the limiting ratio of widths of successive branches given a particular point of measurement (critical point). My two pastel stylized faces are drawn to illustrate the constants. The first sketch that will be presented was modeled after a "Head of a Caryatid" drawn in blue crayon by Amedeo Modigliani in 1909. Then Modigliani's sculptures of very elongated heads, carved in stone from 1909 to 1917, provided models for lengthening the face. My final sketch illustrates how the second Feigenbaum constant can be obtained. The various line segments involved in the calculation of the Feigenbaum constants were constructed and measured using Adobe Illustrator. (Received September 22, 2009)