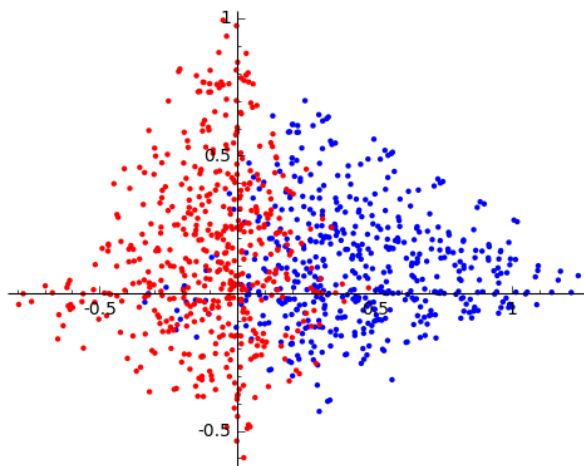


$$f_1 \begin{pmatrix} x \\ y \end{pmatrix} = \begin{bmatrix} 1/2 & 0 \\ 0 & 1/2 \end{bmatrix} \begin{pmatrix} x \\ y \end{pmatrix} \qquad f_2 \begin{pmatrix} x \\ y \end{pmatrix} = \begin{bmatrix} 1/2 & 0 \\ 0 & 1/2 \end{bmatrix} \begin{pmatrix} x \\ y \end{pmatrix} + \begin{pmatrix} 1/2 \\ 0 \end{pmatrix}$$

$$f_3 \begin{pmatrix} x \\ y \end{pmatrix} = \begin{bmatrix} 1/2 & 0 \\ 0 & 1/2 \end{bmatrix} \begin{pmatrix} x \\ y \end{pmatrix} + \begin{pmatrix} 0 \\ 1/2 \end{pmatrix} \quad \text{Add more as necessary....}$$



OK, now this is the coolest fractal ever. No joking! Not only is the picture in red and blue, but f_1 , f_2 , and f_3 have absolutely *nothing* to do with the fractal whatsoever! You see, I included the wrong picture, but you gotta love the red and blue action here! All those dots are **totally cool**. And while it is certainly true that

$$f_1 \begin{pmatrix} 0 \\ 1 \end{pmatrix} = \begin{pmatrix} 0 \\ 1/2 \end{pmatrix},$$

this has absolutely nothing to do with anything!

Of course you'll have something considerably more interesting to say – and this is the place to say it. Make sure you can discuss your fractal image in terms of the affine transformations you used, and all will be copacetic. Be *absolutely* sure to use terminology **appropriately**, even if you say it in **red**. Minimally altered code earns a C at best even if everything else is perfect....

Your complete assignment includes both of the following by the beginning of class on Friday, February 17:

- An email to me at vjmatsko@usfca.edu with a link to your Sage worksheet AND a .pdf/link of your L^AT_EX document (which might be another Sage document);
- A physical copy of your one-page fractally thing, **IN COLOR**. NOTE: *No excuses*. You have two weeks. You *cannot* earn an A with a black-and-white image.