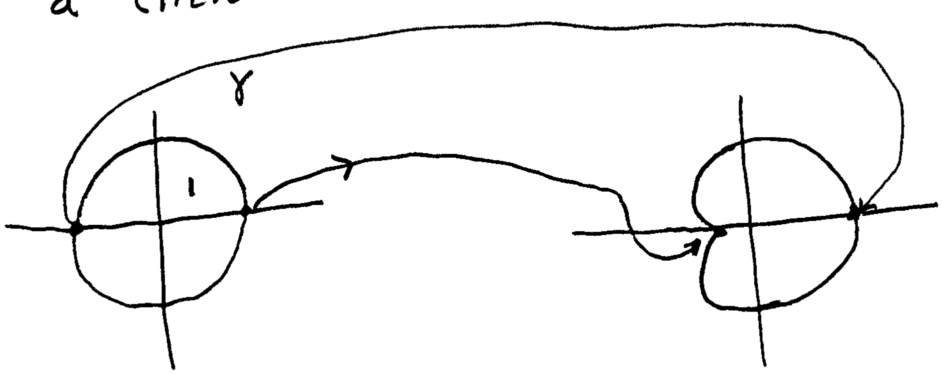
We see that the dynamic aperture for γ^* is the complex conjugate of that for γ. It follows that if one is connected, the other will also be, and therefore the Mandelbrot set is invariant under the transformation

$$\boxed{\begin{aligned} \mathrm{Re}\,\gamma &\leftrightarrow \mathrm{Re}\,\gamma \\ \mathrm{Im}\,\gamma &\leftrightarrow -\mathrm{Im}\,\gamma \end{aligned}} \quad (b)$$

Combining the symmetries (a) and (b) shows that M has reflection symmetry about the lines $\mathrm{Re}\,\gamma = 1$ and $\mathrm{Im}\,\gamma = 0$.

We have $\mu = (\gamma-1)^2/4 - (1/4)$. Start with a circle around the origin of radius 1:



This is the circle on the left of Figure 1.2.5

when $\gamma = 1$, $\mu = -1/4$, ; when $\gamma = -1$, $\mu = \frac{4}{4} - \frac{1}{4} = 3/4$