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

\[
\begin{align*}
\text{Re } Y & \leftrightarrow \text{Re } Y \\
\text{Im } Y & \leftrightarrow -\text{Im } Y 
\end{align*}
\] (b)

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

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

When $Y = 1$, $\mu = -1/4$; when $Y = -1$, $\mu = \frac{n}{4} - \frac{1}{4} = 3/4$

This is the circle on the left of Figure 1.2.5.