

Tenth homework set

Due at the beginning of class on Thursday, Dec 6. No late homework will be accepted.

Fold your homework paper vertically and PRINT your name on the outside.

1. Suppose A , B , and C are large discs attached to the main cardioid of the Mandelbrot set, at least one of A and C belongs to the principal series, B is the largest disc between A and C , and all other discs between A and C are smaller than A , B , and C . If B has order 7, what are the orders of A and C . List all the possibilities. Explain how you arrived at your answer.
2. How many discs of order 33 are attached to the main cardioid of the 3-cycle midget? Explain how you arrived at your answer.
3. Which of $c = -1$, $c = -2$, $c = 1$, and $c = i$ belong to the Mandelbrot set? Explain how you arrived at your answer.