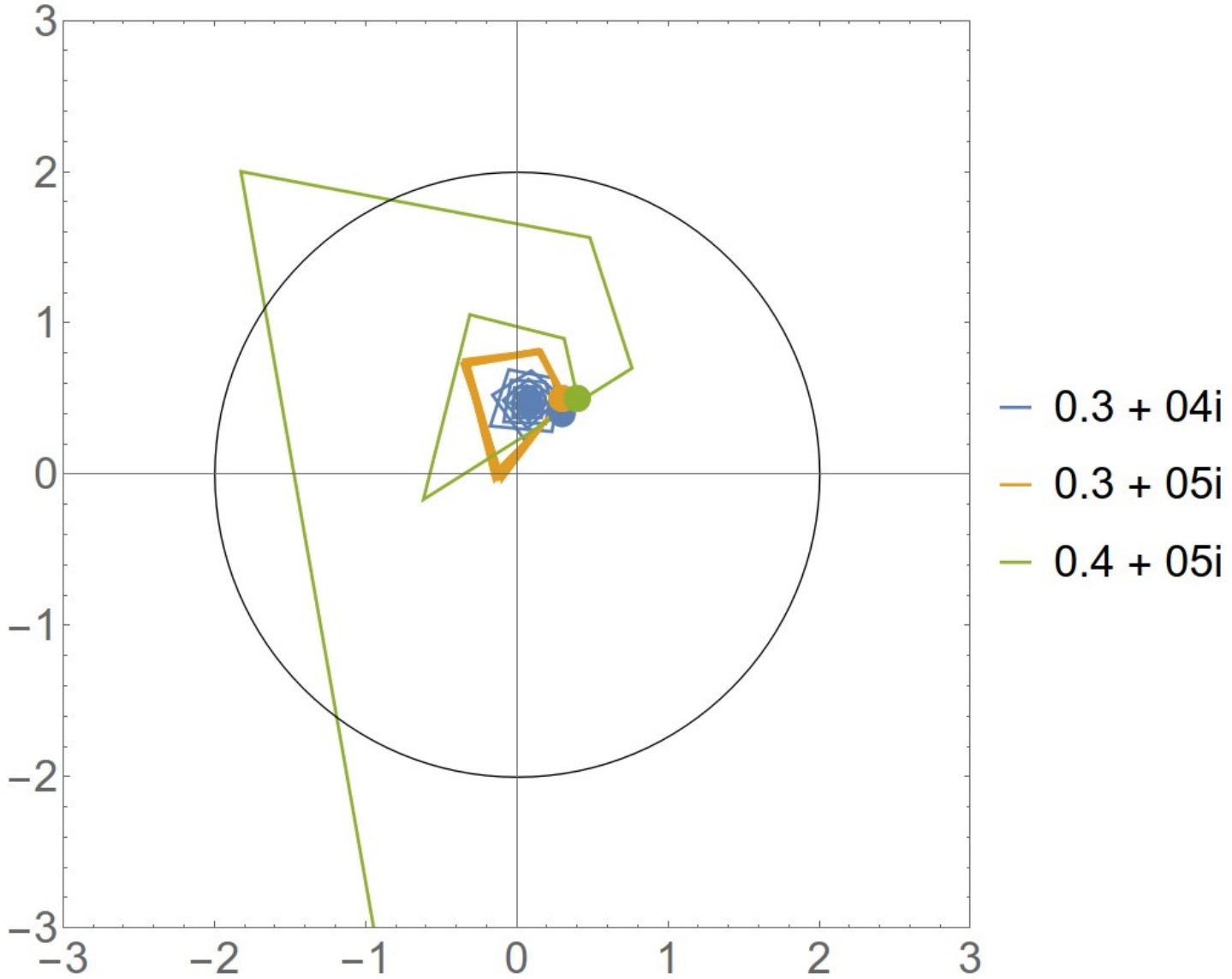
$$z_0 = 0$$

$$z_{n+1} = z_n^2 + C$$

$$C \in \mathcal{M} \; se \; |z_\infty| < 2$$


3
2
1
0
−1
−2
−3
−3
−2
−1
0
1
2
3
0.3 + 04i
0.3 + 05i
0.4 + 05i

```
  int n = 1000;
  int m = 0;
  for (int i = 0; i < n + 1; i++) {
     for (int j = 0; j < n + 1; j++) {
       double dx = 2.5/n;
       double dy = 3./n;
       double x = -2 + i*dx;
       double y = -1.5 + j*dy;

       vector<double> c{x, y};
       vector<double> z0{0, 0};

       for (int k = 0; k < N; k++) {
          vector<double> z2 = Times(z0, z0);

          z0[0] = c[0] + z2[0];
          z0[1] = c[1] + z2[1];
          if (Norm(z0) >= 2) break;
       }
       if (Norm(z0) >= 2) continue;
       else {
         g->SetPoint(m, x, y);
         m++;
       }

     cout << "Point z = (" << x << ", " << y <<
")" << endl;
     }
```

```
  int n = 1000;
  int m = 0;
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         g->SetPoint(m, x, y);
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     cout << "Point z = (" << x << ", " << y <<
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```