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> read("DmB8.txt");
For a list of the Main procedures type: Help8(); for help with a specific procedure type: Help6(ProcedureName); for example Help6(RandomMC);
For a list of the other procedures type: Help8a(); for help with a specific procedure type: Help6(ProcedureName); for example Help6(RandomMC); (1)
> f := raRF(x, 3);

$$f := \frac{2x^3 + 10x^2 + 5x + 8}{3x^3 + 8x^2 + 4x + 2} \quad (2)$$

> ss := SS(f, x);
stabless := SSS(f, x);
ss := [RootOf(3_Z^3 + 6_Z^2 - 6_Z - 3_Z - 8, index=1), RootOf(3_Z^3 + 6_Z^2 - 6_Z - 3_Z - 8, index=2), RootOf(3_Z^3 + 6_Z^2 - 6_Z - 3_Z - 8, index=3), RootOf(3_Z^3 + 6_Z^2 - 6_Z - 3_Z - 8, index=4)]
stabless := [RootOf(3_Z^3 + 6_Z^2 - 6_Z - 3_Z - 8, index=1)] (3)
> evalf(ss);
evalf(stabless);
[1.307515962, -0.2889527924 + 0.8146650332 I, -2.729610377, -0.2889527924 - 0.8146650332 I]
[1.307515962] (4)
> Orb(f, x, -100.1, 2000, 2020)
[1.307515962, 1.307515962, 1.307515962, 1.307515962, 1.307515962, 1.307515962, 1.307515962, 1.307515962, 1.307515962, 1.307515962,
1.307515962, 1.307515962, 1.307515962, 1.307515962, 1.307515962, 1.307515962, 1.307515962, 1.307515962, 1.307515962, 1.307515962,
1.307515962] (5)
> Orb(f, x, -10.1, 2000, 2020);
[1.307515962, 1.307515962, 1.307515962, 1.307515962, 1.307515962, 1.307515962, 1.307515962, 1.307515962, 1.307515962, 1.307515962,
1.307515962, 1.307515962, 1.307515962, 1.307515962, 1.307515962, 1.307515962, 1.307515962, 1.307515962, 1.307515962, 1.307515962,
1.307515962] (6)
> Orb(f, x, 10.1, 2000, 2020);
[1.307515962, 1.307515962, 1.307515962, 1.307515962, 1.307515962, 1.307515962, 1.307515962, 1.307515962, 1.307515962, 1.307515962,
1.307515962, 1.307515962, 1.307515962, 1.307515962, 1.307515962, 1.307515962, 1.307515962, 1.307515962, 1.307515962, 1.307515962,
1.307515962]
> Orb(f, x, 100.1, 2000, 2020);
[1.307515962, 1.307515962, 1.307515962, 1.307515962, 1.307515962, 1.307515962, 1.307515962, 1.307515962, 1.307515962, 1.307515962,
1.307515962, 1.307515962, 1.307515962, 1.307515962, 1.307515962, 1.307515962, 1.307515962, 1.307515962, 1.307515962, 1.307515962,
1.307515962]

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1.

2. Too many numbers to screenshot
 - a. k = 1, 2, 2.5: Converges to a point
 - b. k = 3.1, 3.2 Oscillates between 2 values
 - c. k = 3.3 shows to oscillate between several numbers
 - d. k = 3.5: idk whats happening

$f := \text{MakeNicePol}([1, 2, 3, 4, 5, 6, 7, 8], 1, x)$
"2 stable states at k =", 1

$f := \text{MakeNicePol}([1, 2, 3, 4, 5, 6, 7, 8], 1, x)$

$f := \text{MakeNicePol}([1, 2, 3, 4, 5, 6, 7, 8], 2, x)$

$f := \text{MakeNicePol}([1, 2, 3, 4, 5, 6, 7, 8], 3, x)$

$f := \text{MakeNicePol}([1, 2, 3, 4, 5, 6, 7, 8], 4, x)$

$f := \text{MakeNicePol}([1, 2, 3, 4, 5, 6, 7, 8], 5, x)$

$f := \text{MakeNicePol}([1, 2, 3, 4, 5, 6, 7, 8], 6, x)$

$f := \text{MakeNicePol}([1, 2, 3, 4, 5, 6, 7, 8], 7, x)$

$f := \text{MakeNicePol}([1, 2, 3, 4, 5, 6, 7, 8], 8, x)$

$f := \text{MakeNicePol}([1, 2, 3, 4, 5, 6, 7, 8], 9, x)$

$f := \text{MakeNicePol}([1, 2, 3, 4, 5, 6, 7, 8], 10, x)$

$f := \text{MakeNicePol}([1, 2, 3, 4, 5, 6, 7, 8], 11, x)$

$f := \text{MakeNicePol}([1, 2, 3, 4, 5, 6, 7, 8], 12, x)$

$f := \text{MakeNicePol}([1, 2, 3, 4, 5, 6, 7, 8], 13, x)$

$f := \text{MakeNicePol}([1, 2, 3, 4, 5, 6, 7, 8], 14, x)$

$f := \text{MakeNicePol}([1, 2, 3, 4, 5, 6, 7, 8], 15, x)$

$f := \text{MakeNicePol}([1, 2, 3, 4, 5, 6, 7, 8], 16, x)$

$f := \text{MakeNicePol}([1, 2, 3, 4, 5, 6, 7, 8], 17, x)$

$f := \text{MakeNicePol}([1, 2, 3, 4, 5, 6, 7, 8], 18, x)$

$f := \text{MakeNicePol}([1, 2, 3, 4, 5, 6, 7, 8], 19, x)$

$f := \text{MakeNicePol}([1, 2, 3, 4, 5, 6, 7, 8], 20, x)$

$f := \text{MakeNicePol}([1, 2, 3, 4, 5, 6, 7, 8], 21, x)$
 $f := \text{MakeNicePol}([1, 2, 3, 4, 5, 6, 7, 8], 22, x)$
 $f := \text{MakeNicePol}([1, 2, 3, 4, 5, 6, 7, 8], 23, x)$
 $f := \text{MakeNicePol}([1, 2, 3, 4, 5, 6, 7, 8], 24, x)$
 $f := \text{MakeNicePol}([1, 2, 3, 4, 5, 6, 7, 8], 25, x)$
 $f := \text{MakeNicePol}([1, 2, 3, 4, 5, 6, 7, 8], 26, x)$
 $f := \text{MakeNicePol}([1, 2, 3, 4, 5, 6, 7, 8], 27, x)$
 $f := \text{MakeNicePol}([1, 2, 3, 4, 5, 6, 7, 8], 28, x)$
 $f := \text{MakeNicePol}([1, 2, 3, 4, 5, 6, 7, 8], 29, x)$
 $f := \text{MakeNicePol}([1, 2, 3, 4, 5, 6, 7, 8], 30, x)$
 $f := \text{MakeNicePol}([1, 2, 3, 4, 5, 6, 7, 8], 31, x)$
 $f := \text{MakeNicePol}([1, 2, 3, 4, 5, 6, 7, 8], 32, x)$
 $f := \text{MakeNicePol}([1, 2, 3, 4, 5, 6, 7, 8], 33, x)$
 $f := \text{MakeNicePol}([1, 2, 3, 4, 5, 6, 7, 8], 34, x)$
 $f := \text{MakeNicePol}([1, 2, 3, 4, 5, 6, 7, 8], 35, x)$
 $f := \text{MakeNicePol}([1, 2, 3, 4, 5, 6, 7, 8], 36, x)$
 $f := \text{MakeNicePol}([1, 2, 3, 4, 5, 6, 7, 8], 37, x)$
 $f := \text{MakeNicePol}([1, 2, 3, 4, 5, 6, 7, 8], 38, x)$
 $f := \text{MakeNicePol}([1, 2, 3, 4, 5, 6, 7, 8], 39, x)$
 $f := \text{MakeNicePol}([1, 2, 3, 4, 5, 6, 7, 8], 40, x)$
 $f := \text{MakeNicePol}([1, 2, 3, 4, 5, 6, 7, 8], 41, x)$
 $f := \text{MakeNicePol}([1, 2, 3, 4, 5, 6, 7, 8], 42, x)$
 $f := \text{MakeNicePol}([1, 2, 3, 4, 5, 6, 7, 8], 43, x)$
 $f := \text{MakeNicePol}([1, 2, 3, 4, 5, 6, 7, 8], 44, x)$
 $f := \text{MakeNicePol}([1, 2, 3, 4, 5, 6, 7, 8], 45, x)$
 $f := \text{MakeNicePol}([1, 2, 3, 4, 5, 6, 7, 8], 46, x)$