1.$y$=F$_3$($x$)

1.$y$

1.8

1.6

1.4

1.$y$=

1.2

1.$y$=F$_1$($x$)

1.−101.−81.−61.−41.−2 1.2 1.4 1.6 1.8 1.10 1.12 1.14 1.16 1.18 1.$x$

1.−2

1.−4

1.2fige1efre

Figure 1: Tho superexponentials to base $b = \exp(1/)$ versus real argument by equations e1e1 and e1e3; the horizontal line shows the asymptotic $y =$ . fig1e1fre

In this section, the holomorphic solutions $F$ of equation F(z+1)= $\exp\left(\frac{F(z)}{}\right)$ *e1eeareconsidered.*

At the traditional approach, the iterational procedure for the approximation of the soution converges slwly if at all.

TODO: Henryk, please, copypast here your explanation why the traditional approach fails.

DODO: Dmitrii plans to type there the descriprion of figures.

As usually, we specify the superexponential, indicating the value at zero as subscript. we consider the two superexponentials, $F = F_1$ and $F = F_3$ such that F$_1(0) =$ 1 , $d_3(0) = 3$ ; *e1e13asinthecaseof* b=2, *wechoosethesmallestintegeramongt*

The algorithm of evaluation described below does not imply that the argument of the superexponential is real; so, in figure 2, functions $F_1$ and $F_3$ and their inverse functions $G_1 = F_1^{-1}$ and $G_3 = F_3^{-1}$ are shown in the complex plane.

1$\Im(z)$

18

16

14

12

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1−4

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.72fige1etf

.9−8.9−6.9−4.9−2 .90 .92 .94 .96 .981$\Re(z)$

1$\Im(z)$

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.9−8.9−6.9−4.9−2 .90 .92 .94 .96 .981$\Re(z)$

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