Unit n°31

Etude zu Supplement 2
Analyse der Perioden in den in diesem Supplement betrachteten Collatz- Derivate

co.newcomer

$per(5,11,23,47,19,13,3,7)$

$u(0)=5,\ u(1)=11=u(0)+6,\ u(2)=23=u(1)+12,$

$u(3)=47=u(2)+24,\ u(4)=19=(u(3)+48)\bmod 76,$

$u(5)=(u(4)+96)\bmod 76=?39?=3*13\neq 13$

$u(6)=3=(u(5)+192)\bmod 76,$

$u(7)=7=(u(6)+384)\bmod 76$

co.newcomer.m1, $k=1$

$per(5,13,29,61)$ oder $per(3)$ oder $per(43,89,181,73,149)$

** **per(5,13,29,61)**

$u(0)=5,\ u(1)=13=u(0)+8,\ u(2)=29=u(1)+16,$

$u(3)=61=u(2)+32$

** **per(3)**

$u(0)=3$

** **per(43,89,181,73,149)**

$u(0)=43,\ u(1)=89=u(0)+46,\ u(2)=181=u(1)+92,$

$u(3)=73=(u(2)+184)\bmod 292,$

$u(4)=149=(u(3)+368)\bmod 292$

** **per**(**3**)

$u(0)=3$

** **per**(**43**,**89**,**181**,**73**,**149**)

$u(0)=43,\ u(1)=89=u(0)+46,\ u(2)=181=u(1)+92,$

$u(3)=73=(u(2)+184)\bmod 292,$

$u(4)=149=(u(3)+368)\bmod 292$

co.newcomer.m1, $k=2$

$per(3,11)$ oder $per(5)$

oder $per(13,31,67,139,283,571,37,79,163,331,29,7,19,43)$

oder $per(181,367,739,1483,2971,313,631)$

** **per**(**3**,**11**)

$u(0)=3,\ u(1)=u(0)+8$

** **per**(**5**)

$u(0)=5$

** **per**(**13**,**31**,**67**,**139**,**283**,**571**,**37**,**79**,**163**,**331**,**29**,**7**,**19**,**43**)

$u(0)=13,\ u(1)=31=u(0)+18,\ u(2)=67=u(1)+36,$

$u(3)=139=u(2)+72,\ u(4)=283=u(3)+144,$

$u(5)=571=u(4)+288,$

$u(6)=37=(u(5)+576)\bmod 1110,$

$u(7)=79=(u(6)+1152)\bmod 1110,$

$u(8)=163=(u(7)+2304)\bmod 1110,$

$u(9)=331=(u(8)+4608)\bmod 1110,$

$u(10)=(u(9)+9216)\bmod 1110=667\,?=23*29\neq 29,$

$u(11)=7=(u(10)+18432)\bmod 1110,$

** **per**(**181**, **367**, **739**, **1483**, **2971**, **313**, **631**)

$u(0)=181,\ u(1)=367=u(0)+186,\ u(2)=739=u(1)+372,$

$u(3)=1483=u(2)+744,\ u(4)=2971=u(3)+1488,$

$u(5)=313=(u(4)+2976)\bmod 5634,$

$u(6)=631=(u(5)+5952)\bmod 5634$

co.newcomer.m2, $k=1$

$per(6,14,30,62)$ oder $per(4)$ oder $per(44,90,182,74,150)$

** **per**(**6**, **14**, **30**, **62**)

$u(0)=6,\ u(1)=14=u(0)+8,\ u(2)=30=u(1)+16,$

$u(3)=62=u(2)+32$

** **per**(**4**)

$u(0)=4$

** **per**(**44**, **90**, **182**, **74**, **150**)

$u(0)=44,\ u(1)=90=u(0)+46,\ u(2)=182=u(1)+92,$

$u(3)=74=(u(2)+184)\bmod 292,$

$u(4)=150=(u(3)+368)\bmod 292$

co.newcomer.m2, $k=4$

$per(11,27,15,35,75,155,315,635,45,17)$ oder $per(23,51,107,47)$

** **per**(**11**, **27**, **15**, **35**, **75**, **155**, **315**, **635**, **45**, **17**)

$u(0)=15,\ u(1)=35=u(0)+20,\ u(2)=75=u(1)+40,$

$u(3)=155=u(2)+80,\ u(4)=315=u(3)+160,$

$u(5)=635=u(4)+320,\ u(6)=45=(u(5)+640)\bmod 41$

$u(7)=17=(u(6)+1280)\bmod 41$

** **per**(**23**,**51**,**107**,**47**)

$u(0)=23,\ u(1)=51=u(0)+28,\ u(2)=107=u(1)+56,$

$u(3)=47=(u(2)+122)\bmod 91$

Weiter! Diskussion!