

数の分割 (Partition) について

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part5=:3 :0
select. y
  case. 1 do. t=.<1
  case. 2 do. t=.2;1 1
  case. 3 do. t=.3;2 1;1 1 1
  case. 4 do. t=.4;3 1;2 2;2 1 1;1 1 1 1
  case. 5 do. t=.5;4 1;3 2;3 1 1;2 2 1;2 1 1 1;1 1 1 1 1
end.
)

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<pre>]P1=:part5 1 1 2 1 1]P2=:part5 2 3 2 1 1 1 1]P3=:part5 3 </pre>	<pre>]P4=:part5 4 4 3 1 2 2 2 1 1 1 1 1 1]P5=:part5 5 5 4 1 3 2 3 1 1 2 2 1 2 1 1 1 1 1 1 1 1 </pre>
<pre> next0=:([:>:&.>{.),],&.>1: next0 P1 2 1 1 next0 P2 3 2 1 1 1 1 </pre>	<pre>]Q4=:next0 P3 4 3 1 2 1 1 1 1 1 1]Q5=:next0 P4 5 4 1 3 1 1 2 1 1 1 1 1 1 1 1] Q6=:next0 P5 6 5 1 4 1 3 1 1 2 1 1 1 1 1 1 1 1 1 1 1 1 </pre>

<pre> dev=:3 :0 r=.y;(y-k),k=.1 while.k<h=.<.:y do.r=.r,<(y-k),k=.k+1 end. h=.{.>{:r while.h>1 do.r=.r,<(0<s)#s=.s,y-+/s=(k=.<.y%h)\$h=.h-1 end.) </pre>	<pre> next0=:3 :0 h=.{:>1)#i.#t=>y r=.<(<+/&>(-<:k)<\(k=.h{t}\$1)h};/t) next=:3 :0 r=.next0 y if.2<b=.+/s=.1=t=>y do. .r,<((1-s)#t),+/&>(-b)<\s#t else. r end.) </pre>
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<pre> devide=:3 :0 s=.r=.y while.0=({.>y)-{.>{:s do.r=.r,s=.next{:s end. \::~.\::~&.>r=:r) </pre>	<pre> part=:3 :0 r=.(>:k=.1){.s=.dev y while.k<(#s)-2 do.r=.r,devide(k=.k+1){s end. (~.\::~&.>r),<y\$1) </pre>
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dev 7

7	6 1	5 2	4 3	3 3 1	2 2 2 1	1 1 1 1 1 1 1
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dev 8

8	7 1	6 2	5 3	4 4	3 3	2 2 2	1 1 1 1 1 1 1 1
					2	2	

dev 9

9	8 1	7 2	6 3	5 4	4 4 1	3 3 3	2 2 2 2 1	1 1 1 1 1 1 1 1 1
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next <4 3

4 2 1

next <4 2 1

4 1 1 1

next <4 1 1 1

4 3	3 1 1 1 1
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divide<4 3

4 3	4 2 1	4 1 1 1
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3 5\$ P7=:part 7

7	6 1	5 2	5 1 1	4 3
4 2 1	4 1 1 1	3 3 1	3 2 2	3 2 1 1
3 1 1 1 1	2 2 2 1	2 2 1 1 1	2 1 1 1 1 1	1 1 1 1 1 1 1

\$ part 8

21

\$ part 9

28

\$ part 10

37

10 4 \$ partition 10

10	9 1	8 2	8 1 1
7 3	7 2 1	7 1 1 1	6 4
6 3 1	6 2 2	6 2 1 1	6 1 1 1 1
5 5	5 4 1	5 3 2	5 3 1 1
5 2 1 1 1	5 2 1 1 1	5 1 1 1 1 1	4 4 2
4 3 3	4 3 1 1 1	4 2 1 1 1 1	4 1 1 1 1 1 1
3 3 3 1	3 3 2 2	3 3 2 1 1	3 3 1 1 1 1
3 2 1 1 1 1 1	3 1 1 1 1 1 1 1	4 2 2 2	2 2 2 2 2
2 2 2 2 1 1	2 2 2 1 1 1 1	2 2 1 1 1 1 1 1	2 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1	10	9 1	8 2

<pre>test=:3 :0 if. 1>:+/1=q=.>y do. next0 y else. (next1 y), y, next0 y end.)</pre>	<pre>test1=:3 :0 s=. r=. y while. 0=({.>y)-{.>{:s do. r=. r, s=. test{:s end. Ÿ:~.Ÿ:~&.>r=.}:r)</pre>
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test1<5 5

5 5	5 4 1	5 3 2	5 3 1 1	5 2 2 1	5 2 1 1	5 1 1 1 1 1
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					1	
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test1<4 4 2

6 4	5 4 1	4 4 2	4 4 1 1	4 3 3
4 3 2 1	4 3 1 1 1	4 2 2 2	4 2 1 1 1 1	4 1 1 1 1 1 1