ALGORITHM INTFACT: An Algorithm to Factorize Integers of arbitrary size in real time.

Subhendra Basu June 21, 2016

1 Abstract

This document talks about a revolutionary Integer Factorization Algorithm and/or Formal Procedure. However, no rigorous mathematical proof is provided as the basis of the procedure is related to the distribution of primes, digit sequences of e and π and also the distribution of non-trivial Riemann zeros. This is still an open problem. However this procedure might throw some light on how to go about solving the unsolved mathematical conjecture as list on the website of Clay Mathematical Institute. I have not read any more than the trial division process for Integer Factorization but I am aware that some sophisticated algorithms exist like GNFS (Global Number Field Sieve). Nothing beyond that. For people, looking for rigorous proofs, this article could be a starting point for further research. I am being humble, honest and generous here!!

2 Reading the Number as a String

I am not going into the nitty gritty of the code. At this point of the flow, we read the number to be factorized from a file and store it in memory as a string. At this point, we need not bring into play GNU-MP libraries for arbitrary precision math, yet.

3 Deriving the Riemann Symmetry Relations from the Number and Its Reverse

We write the number and its reverse stacked one above the other. It does not matter which is stacked above which one. What matters is the relative symmetry between the Riemann Zeros if they exist in the digit patterns of the two vectors.

As an example, if N = 4251161764252561, The stack, 42511617642525611652524671611524In column #2 and #3, We have, 2565

3.1 Observations

- 1. 25 and 65 are Riemann zeros and hence symmetrical.
- 2. 52 and 56 are Riemann zeros and hence symmetrical.
- 3. 25 and 56 are Riemann zeros and hence anti-symmetrical.
- 4. 52 and 65 are Riemann zeros and hence anti-symmetrical.

4 Prime Time: Counting Primes

Once the Riemann Zeros and their Relative symmetries have been identified. We follow the simple process for symmetrical and anti-symmetrical Riemann zeros: For symmetrical Riemann Zeros, we fetch the integral part of the Riemann Zeros and 10 decimal digits for a total of twelve digits excluding the decimal point. My point of reference is the

http://www.dtc.umn.edu/~Odlyzko/zeta_tables/zeros2.

For N = 4251161764252561

Stack is,

4251161764252561

1652524671611524

Symmetrical Zeros:

25 and 65

52 and 56

Asymmetrical Zeros:

52 and 65

25 and 56

For symmetry,

including the decimal digits

25.010857580 (rounded off to 9 decimal digits)

65.112544048 (rounded off to 9 decimal digits)

Primes: 11, 02, 47, 05 Number of Primes: 4

And

52.970321478 (rounded off to 9 decimal digits)

56.446247697 (rounded off to 9 decimal digits)

Primes: 47, 23, 17, 71, 79, 97

Number of Primes: 6

For cross or anti-symmetry,

Original Zero:

25.010857580

65.112544048

Primes: 11, 02, 47, 05 Number of Primes: 4

Cross-Symmetry #2:

Original Zero:

 $52.970321478 \\ 56.446247697$

Primes: 47, 23, 17, 71, 79, 97

Number of Primes: 6

This completes the anlysis of prime numbers in the retrieved Riemann zeros (upto 10 decimal places). With the Riemann zeros being in the range from 14 to 98.

So to summarize the yield from the Prime Number Counting Step: Iteration 1 (without rotation):

1. From Symmetry:

Number of Primes: 4

Number of Primes: 6

1. From Cross Symmetry:

Number of Primes: 4

Number of Primes: 6

5 Analysis and decoding of factors using lookups based on π and e digit sequences

```
localhost:intfact-riemann bosons$ !tim
time ./factorize
Number Read was:
Iteration # 1
Cross Symmetry #2
 2-way Primes: 6
Symmetry #2
 2-way Primes: 4
Symmetry #1
 2-way Primes: 4
Cross Symmetry #2
2-way Primes: 6
Number stack is:
125
521
Iteration # 2
Cross Symmetry #2
2-way Primes: 1
Number stack is:
125
215
Factor: 00000
real 0m0.010s
```

```
user 0m0.002s
sys 0m0.005s
```

We visualize cross-symmetry prime counts on "parallel" branches as in a electrical circuit.

We visualize symmetry prime counts in "series".

All odd iterations are e-centric. [1,3,5,...]

All even iterations are π -centric.[2,4,6,...]

For N=125 (above),

Iteration #1 (No rotation):

Cross - Symmetry: 6, 4

Symmetry: 4, 6.

For Cross - Symmetry: The Input vector is: 5 2 1

For Symmetry: The Input Vector is: 1 2 5

We can visualize the above output as:

 $6 \rightarrow$

 $\rightarrow 4 \rightarrow 6$.

1 _

Also, the corresponding input values are:

$$5 \rightarrow 2 \rightarrow 5$$
.

this is because 5 is the first digit of the cross-symmetric input,

2 is the 2^{nd} digit of the symmetric input

and

5 is the 3^{rd} digit of the symmetric input.

Solving for parallel,

55 Input

64 Prime Counts

72 Reverse of the e digit sequence 2.71...

 $\Pi[765]$ or the 765^{th} digit of π is 9.

 $\Pi[245]$ or the 245^{th} digit of π is 0.

E[90] or the 90^{th} digit of e is 8.

E[09] or th 9^{th} digit of e is 8.

For Series,

25 Input

46 Prime Count

71 e-digit sequence from 2.71...

 $\Pi[742] = 7$

 $\Pi[165] = 2$

E[27] = 1

E[72] = 0

Parallel component is in series with Series component just calculated.

Summarizing,

SP: Series \rightarrow Parallel: $\Pi[08] = 5$

S'P': Series(Reverse) \rightarrow Parallel(Reverse): E[18]=5

For 2nd Iteration: π -centric (vectors relatively rotated by 1)

Number stack looks like:

125 symmetric input

215 cross-symmetric input

Cross-symmetry:

2 Input - Cross Symmetry

1 Prime count

 $3 \pi \text{sequence}$

 $\Pi[312] = 6$

 $\Pi[06] = 2$

 $\Pi[60] = 4$

E[04] = 2

So factor(s): 5, 25

6 Dr. Manindra Agrawal, IIT Kanpur 101 digit challenge vector

For those who have scarcity of time in going through the computation steps: To summarize,

computation is performed in 2 simple steps,

In first step, 3 components are fetched,

Input or in other words, digits from the number to be factorized.

For symmetry, input digits are fetched from front (scanning left to right).

For anti-symmetry, input digits are fetched from rear (scanning right to left).

2nd component is the Prime count itself from the previous step of the overall computational process.

3rd component is/are the digit(s) from PI or E depending on whether it is even (PI-centric) or odd (E-centric).

Once the above info is ready we check for similar steps down the line, read: symmetry for current symmetry and anti-symmetry for current anti-symmetry.

If a similar step is there down the line (next step), we club it with the current after performing the substitutions mentioned above.

The second half of the computation involves e/pi lookups. Generally, PI lookup of the concatenation of e/pi digit + Prime count + input suffices in most cases .

But E-lookup is also required when we are combining symmetries/anti-symmtries of the same type as above.

Once the lookup is available, we perform further e/pi lookups where necessary for pi/e information as calculated above.

Very difficult to explain and follow here. I am writing C++ code for the same (decoding step) and that should make it crystal clear.

Code available at (almost done, in printFactors API):

https://bitbucket.org/zilchbosons/intfact-riemann

Now Solving Dr. Manindra Agarwalś 101 digit vector:

Reproducing the computer output as it is here:

```
Number Read was:\\
3044768685755515266686036807599214104330883228912\\
....0246288657846380538996794608835958544046240163340857\\
```

Iteration # 1

```
2-way Primes: 7
Computation Start **********
3 { Input }
7 { Prime Count }
2 { e-sequence }
\end {verbatim}
\pi = 4 \
E[4] = 2 \setminus
Indeed one of the factors starts with 2. \
\begin {verbatim}
Computation End ************
Cross Symmetry #2
 2-way Primes: 6
Computation Start ******
5 { Input : 2nd last digit }
6 { Prime Count }
2 { e-sequence }
\Pi[265] = 3
E[3] = 8
So the factor so far is 28
Computation End *******
Symmetry #2
 2-way Primes: 7
Computation Start *******
4 { Input : 3rd digit }
7 { Prime Count }
```

```
7 { 100th digit of e-sequence, from behind as this is symmetry of type 2 }
Above to be clubbed with next symmetry condition...
Computation End *******
Symmetry #1
 2-way Primes: 7
Computation Start *****
4 { Input : 4th digit }
7 { Prime Count }
8 { 3rd digit of e-sequence, symmetry of type 1 }
Last two, summarised,
44 { Input }
77 { Prime Count }
78 { e -seq }
\end {verbatim}
$\Pi$[774] = 8 \\
\pi = 5 \
E[58] = 9 \setminus
\pi = 0 \
So the factor so far is { 2809 }
\begin{verbatim}
Computation End ******
Cross Symmetry #1
 2-way Primes: 4
Computation Start *****
4 { From behind, Input , 5th digit from last }
4 { Prime count }
2 { e-seq , 4 digit }
clubbing it with next anti-symmetry
```

```
\begin {verbatim}
Computation End ****
Cross Symmetry #1
 2-way Primes:
Computation Start *****
3 { Input 6th digit from last , type 1 cross sym }
5 { Prime Count }
6 { 94th digit of e-seq }
              from previous anti-sym,
Summarizing,
43 {Input}
45 { Prime Count }
26 { e-seq }
\Pi[244] = 2
\Pi[653] = 6
E[442] = 0
E[356] = 1
E[20] = 6
E[61] = 6
```

Factor so far 280966

To summarize, computation is performed in 2 simple steps, In first step, 3 components are fetched, Input or in other words, digits from the number to be factorized. For symmetry, input digits are fetched from front (scanning left to right). For anti-symmetry, input digits are fetched from rear (scanning right to left).

2nd component is the Prime count itself from the previous step of the overall computational process.

3rd component is/are the digit(s) from PI or E depending on whether it is even (PI-centric) or odd (E-centric).

Once the above info is ready we check for similar steps down the line, read: symmetry for current symmetry and anti-symmetry for current anti-symmetry.

If a similar step is there down the line (next step), we club it with the current after performing the substitutions mentioned above.

The second half of the computation involves e/pi lookups. Generally, PI lookup of the concatenation of e/pi digit + Prime count + input suffices in

most cases . But E-lookup is also required when we are combining symmmetries/anti-symmtries of the same type as above. Once the lookup is available, we perform further e/pi lookups where necessary for pi/e information as calculated above. Very difficult to explain and follow here. I am writing C++ code for the same (decoding step) and that should make it crystal clear. Code available at (almost done, in printFactors API): https://bitbucket.org/zilchbosons/intfact-riemann

```
Computation End *****
Symmetry #2
 2-way Primes: 7
Symmetry #1
2-way Primes: 5
Symmetry #1
2-way Primes:
                5
Symmetry #1
2-way Primes:
Cross Symmetry #1
2-way Primes:
Cross Symmetry #2
2-way Primes:
Symmetry #2
2-way Primes:
                5
Symmetry #1
 2-way Primes: 5
```

2-way Primes: 6

Symmetry #2

2-way Primes: 6

Symmetry #1

2-way Primes: 6

Cross Symmetry #2

2-way Primes: 6

Symmetry #2

2-way Primes: 5

Symmetry #1

2-way Primes: 5

Cross Symmetry #1

2-way Primes: 5

Cross Symmetry #2

2-way Primes: 2

Symmetry #2

2-way Primes: 2

Symmetry #2

Symmetry #2

2-way Primes: 5

Symmetry #1

2-way Primes: 7

Cross Symmetry #1

2-way Primes: 5

Cross Symmetry #1

2-way Primes: 4

Symmetry #2

2-way Primes: 7

Symmetry #1

2-way Primes: 7

Cross Symmetry #2

Symmetry #2

2-way Primes: 7 Number stack is:

2-way Primes: 6

Iteration # 2

Cross Symmetry #2

Symmetry #2

2-way Primes: 5

Cross Symmetry #1

2-way Primes: 7

Cross Symmetry #1

2-way Primes: 7

Symmetry #2

2-way Primes: 2

Symmetry #1

2-way Primes: 4

Symmetry #1

2-way Primes: 5

Cross Symmetry #2

2-way Primes: 5

Symmetry #1

2-way Primes: 5

Cross Symmetry #1

2-way Primes: 5

Cross Symmetry #2

2-way Primes: 3

Cross Symmetry #2

2-way Primes: 5

Cross Symmetry #2

2-way Primes: 5

Symmetry #1

2-way Primes: 3

Cross Symmetry #2

2-way Primes: 3

Cross Symmetry #1

2-way Primes: 5

Symmetry #2

2-way Primes: 5

Cross Symmetry #2

2-way Primes: 5

Symmetry #2

2-way Primes: 5

Symmetry #2

2-way Primes: 4

Cross Symmetry #1

2-way Primes: 7

Cross Symmetry #1

2-way Primes: 7

Symmetry #1

2-way Primes: 5

Cross Symmetry #2

2-way Primes: 5

Cross Symmetry #2

2-way Primes: 5 Number stack is:

Iteration # 3

Symmetry #2

2-way Primes: 3

Symmetry #1

2-way Primes: 5

Cross Symmetry #1

2-way Primes: 5

Cross Symmetry #1

Symmetry #1

2-way Primes: 5

Cross Symmetry #2

2-way Primes: 4

Symmetry #1

2-way Primes: 2

Symmetry #1

2-way Primes: 3

Cross Symmetry #1

2-way Primes: 5

Symmetry #1

2-way Primes: 3

Cross Symmetry #2

2-way Primes: 3

Cross Symmetry #2

2-way Primes: 1

Cross Symmetry #2

2-way Primes: 1

Cross Symmetry #2

Symmetry #2

2-way Primes: 3

Cross Symmetry #1

2-way Primes: 5

Symmetry #2

2-way Primes: 3

Symmetry #2

2-way Primes: 2

Cross Symmetry #2

2-way Primes: 4

Symmetry #2

2-way Primes: 5

Cross Symmetry #1

2-way Primes: 5

Cross Symmetry #1

2-way Primes: 5

Symmetry #2

2-way Primes: 5

Symmetry #1

2-way Primes: 0 Number stack is:

Iteration # 4

Cross Symmetry #1

2-way Primes: 2

Cross Symmetry #2

2-way Primes: 4

Symmetry #1

2-way Primes: 7

Symmetry #2

2-way Primes: 2

Symmetry #1

2-way Primes: 5

Symmetry #1

2-way Primes: 3

Symmetry #1

2-way Primes: 2

Cross Symmetry #1

2-way Primes: 2

Symmetry #2

2-way Primes: 4

Symmetry #1

2-way Primes: 6

Cross Symmetry #1

2-way Primes: 6

Cross Symmetry #1

2-way Primes: 6

Symmetry #2

2-way Primes: 6

Symmetry #1

2-way Primes: 4

Cross Symmetry #1

2-way Primes: 4

Cross Symmetry #2

2-way Primes: 2

Symmetry #2

2-way Primes: 2

Symmetry #2

2-way Primes: 5

Symmetry #1

2-way Primes: 2

Symmetry #2

2-way Primes: 7

Cross Symmetry #2

2-way Primes: 4

Cross Symmetry #1

2-way Primes: 2 Number stack is:

Iteration # 5

Symmetry #1

2-way Primes: 5

Cross Symmetry #2

2-way Primes: 7

Cross Symmetry #1

2-way Primes: 7

Cross Symmetry #1

2-way Primes: 4

Cross Symmetry #2

2-way Primes: 7

Symmetry #2

2-way Primes: 4

Cross Symmetry #1

2-way Primes: 1

Symmetry #1

2-way Primes: 7

Cross Symmetry #2

2-way Primes: 2

Symmetry #1

2-way Primes: 5

Cross Symmetry #1

2-way Primes: 6

Symmetry #1

2-way Primes: 7

Symmetry #2

2-way Primes: 4

Symmetry #2

2-way Primes: 7

Cross Symmetry #1

2-way Primes: 6

Symmetry #2

2-way Primes: 5

Cross Symmetry #2

2-way Primes: 2

Symmetry #2

2-way Primes: 7

Cross Symmetry #1

2-way Primes: 1

Symmetry #1

2-way Primes: 4

Cross Symmetry #1

2-way Primes: 4

Cross Symmetry #2

2-way Primes: 7 Cross Symmetry #1 2-way Primes: 7 Cross Symmetry #2 2-way Primes: 7 Symmetry #2 2-way Primes: 5 Symmetry #1 2-way Primes: 7 Number stack is: 43361042640445859538806497699835083648756882642021982238803340141299570863068666 Iteration # 6 Symmetry #2 2-way Primes: Symmetry #2 2-way Primes: 7 Symmetry #1 2-way Primes: 4

Cross Symmetry #1

2-way Primes: 7

2-way Primes: 4

Symmetry #2

2-way Primes: 7

Cross Symmetry #2

2-way Primes: 5

Symmetry #2

2-way Primes: 3

Symmetry #1

2-way Primes: 6

Cross Symmetry #2

2-way Primes: 1

Symmetry #2

2-way Primes: 6

Symmetry #1

2-way Primes: 5

Symmetry #1

2-way Primes: 6

Cross Symmetry #1

Symmetry #1

2-way Primes: 3

Cross Symmetry #1

2-way Primes: 3

Cross Symmetry #2

2-way Primes: 3

Symmetry #2

2-way Primes: 3

Cross Symmetry #2

2-way Primes: 1

Symmetry #1

2-way Primes: 3

Cross Symmetry #1

2-way Primes: 3

Cross Symmetry #2

2-way Primes: 3

Symmetry #2

2-way Primes: 3

Cross Symmetry #1

2-way Primes: 3

Symmetry #2

2-way Primes: 5

Symmetry #1

2-way Primes: 6

Cross Symmetry #2

2-way Primes: 1

Symmetry #2

2-way Primes: 6

Symmetry #1

2-way Primes: 3

Cross Symmetry #2

2-way Primes: 5

Symmetry #1

2-way Primes: 7

Cross Symmetry #1

2-way Primes: 7

Cross Symmetry #2

2-way Primes: 4

Symmetry #1

2-way Primes: 7

Symmetry #1

2-way Primes: 6

Cross Symmetry #2

2-way Primes: 6

Symmetry #1

2-way Primes: 7

Symmetry #2

2-way Primes: 7 Number stack is:

Iteration # 7

Symmetry #1

2-way Primes: 3

Cross Symmetry #1

2-way Primes: 6

Symmetry #2

2-way Primes: 5

Cross Symmetry #2

Symmetry #1

2-way Primes: 9

Symmetry #1

2-way Primes: 3

Cross Symmetry #2

2-way Primes: 3

Cross Symmetry #2

2-way Primes: 3

Symmetry #2

2-way Primes: 3

Symmetry #2

2-way Primes: 9

Cross Symmetry #2

2-way Primes: 4

Symmetry #1

2-way Primes: 5

Cross Symmetry #1

2-way Primes: 6

Symmetry #2

2-way Primes: 9

Cross Symmetry #2

2-way Primes: 9 Number stack is:

Iteration # 8

Cross Symmetry #1

2-way Primes: 6

Symmetry #2

2-way Primes: 2

Cross Symmetry #2

2-way Primes: 4

Symmetry #2

2-way Primes: 5

Cross Symmetry #2

2-way Primes: 7

Symmetry #1

2-way Primes: 7

Cross Symmetry #1

Symmetry #1

2-way Primes: 5

Cross Symmetry #1

2-way Primes: 5

Cross Symmetry #2

2-way Primes: 4

Cross Symmetry #2

2-way Primes: 4

Cross Symmetry #1

2-way Primes: 5

Symmetry #2

2-way Primes: 5

Cross Symmetry #1

2-way Primes: 6

Symmetry #2

2-way Primes: 7

Cross Symmetry #2

2-way Primes: 7

Symmetry #1

2-way Primes: 4

Symmetry #1

2-way Primes: 2

Cross Symmetry #1

2-way Primes: 6 Number stack is:

Iteration # 9

Symmetry #2

2-way Primes: 3

Symmetry #1

2-way Primes: 5

Cross Symmetry #1

2-way Primes: 5

Cross Symmetry #2

2-way Primes: 1

Symmetry #2

2-way Primes: 1

Cross Symmetry #1

2-way Primes: 4

Symmetry #1

2-way Primes: 4

Cross Symmetry #1

2-way Primes: 5

Cross Symmetry #2

2-way Primes: 6

Cross Symmetry #2

2-way Primes: 4

Symmetry #2

2-way Primes: 5

Symmetry #1

2-way Primes: 3

Cross Symmetry #2

2-way Primes: 4

Cross Symmetry #2

2-way Primes: 4

Symmetry #2

2-way Primes: 3

Cross Symmetry #2

2-way Primes: 4

Cross Symmetry #2

2-way Primes: 6

Cross Symmetry #1

2-way Primes: 5

Symmetry #2

2-way Primes: 4

Cross Symmetry #2

2-way Primes: 4

Cross Symmetry #1

2-way Primes: 5

Symmetry #1

2-way Primes: 1

Cross Symmetry #1

2-way Primes: 5

Cross Symmetry #2

2-way Primes: 1

Symmetry #1

2-way Primes: 3

Cross Symmetry #1

2-way Primes: 3 Number stack is:

Iteration # 10

Cross Symmetry #1

2-way Primes: 2

Cross Symmetry #2

2-way Primes: 6

Symmetry #1

2-way Primes: 3

Cross Symmetry #1

2-way Primes: 4

Symmetry #1

2-way Primes: 4

Symmetry #1

2-way Primes: 4

Cross Symmetry #1

Symmetry #1

2-way Primes: 6

Cross Symmetry #2

2-way Primes: 8

Symmetry #1

2-way Primes: 6

Cross Symmetry #1

2-way Primes: 6

Cross Symmetry #2

2-way Primes: 3

Cross Symmetry #1

2-way Primes: 6

Symmetry #2

2-way Primes: 6

Cross Symmetry #2

2-way Primes: 8

Symmetry #2

2-way Primes: 6

Cross Symmetry #1

2-way Primes: 4

Symmetry #2

2-way Primes: 4

Cross Symmetry #1

2-way Primes: 4

Symmetry #2

2-way Primes: 3

Cross Symmetry #2

2-way Primes: 6

Cross Symmetry #1

2-way Primes: 2

Symmetry #2

2-way Primes: 4

Symmetry #1

2-way Primes: 4 Number stack is:

Iteration # 11

Symmetry #2

Cross Symmetry #2

2-way Primes: 3

Symmetry #2

2-way Primes: 4

Symmetry #1

2-way Primes: 4

Cross Symmetry #1

2-way Primes: 3

Cross Symmetry #1

2-way Primes: 4

Symmetry #2

2-way Primes: 3

Cross Symmetry #2

2-way Primes: 3

Symmetry #1

2-way Primes: 2

Cross Symmetry #1

2-way Primes: 4

Symmetry #1

2-way Primes: 8

Cross Symmetry #2

2-way Primes: 3

Symmetry #2

2-way Primes: 3

Cross Symmetry #2

2-way Primes: 6

Symmetry #2

2-way Primes: 6

Symmetry #1

2-way Primes: 5

Symmetry #1

2-way Primes: 5

Cross Symmetry #2

2-way Primes: 5

Cross Symmetry #2

2-way Primes: 5

Symmetry #2

2-way Primes: 5

Symmetry #1

2-way Primes: 6

Cross Symmetry #2

2-way Primes: 6

Symmetry #1

2-way Primes: 3

Cross Symmetry #2

2-way Primes: 3

Symmetry #2

2-way Primes: 8

Symmetry #2

2-way Primes: 4

Cross Symmetry #1

2-way Primes: 4

Symmetry #2

2-way Primes: 2

Cross Symmetry #2

2-way Primes: 3

Cross Symmetry #1

2-way Primes: 4

Cross Symmetry #1

2-way Primes: 3

Symmetry #2

2-way Primes: 4

Symmetry #1

2-way Primes: 4

Cross Symmetry #2

2-way Primes: 3

Symmetry #1

2-way Primes: 6

Symmetry #1

2-way Primes: 7

Cross Symmetry #2

2-way Primes: 1 Number stack is :

Iteration # 12

Symmetry #2

2-way Primes: 3

Symmetry #1

2-way Primes: 3

Symmetry #1

2-way Primes: 5

Symmetry #1

2-way Primes: 2

Symmetry #1

2-way Primes: 3

Cross Symmetry #1

2-way Primes: 3

Cross Symmetry #2

2-way Primes: 3

Cross Symmetry #2

2-way Primes: 1

Cross Symmetry #2

2-way Primes: 3

Cross Symmetry #1

2-way Primes: 3

Symmetry #2

2-way Primes: 2

Symmetry #2

2-way Primes: 5

Symmetry #2

2-way Primes: 3

Symmetry #1

2-way Primes: 3

Cross Symmetry #2

2-way Primes: 4

Symmetry #1

2-way Primes: 7

Symmetry #2

2-way Primes: 7 Number stack is:

Iteration # 13

Cross Symmetry #2

2-way Primes: 5

Cross Symmetry #1

2-way Primes: 3

Cross Symmetry #2

2-way Primes: 5

Symmetry #2

2-way Primes: 4

Symmetry #1

2-way Primes: 3

Cross Symmetry #1

2-way Primes: 3

Cross Symmetry #2

2-way Primes: 4

Symmetry #2

2-way Primes: 4

Symmetry #1

2-way Primes: 5

Symmetry #1

Cross Symmetry #1

2-way Primes: 4

Cross Symmetry #2

2-way Primes: 2

Symmetry #2

2-way Primes: 2

Symmetry #1

2-way Primes: 6

Cross Symmetry #2

2-way Primes: 6

Symmetry #1

2-way Primes: 2

Symmetry #2

2-way Primes: 2

Cross Symmetry #2

2-way Primes: 6

Symmetry #2

2-way Primes: 6

Symmetry #1

2-way Primes: 2

Cross Symmetry #1

2-way Primes: 4

Symmetry #2

2-way Primes: 5

Symmetry #2

2-way Primes: 5

Symmetry #1

2-way Primes: 4

Cross Symmetry #1

2-way Primes: 3

Cross Symmetry #2

2-way Primes: 4

Symmetry #2

2-way Primes: 3

Symmetry #1

2-way Primes: 4

Cross Symmetry #1

2-way Primes: 3

Symmetry #2

2-way Primes: 5

Cross Symmetry #2

2-way Primes: 3 Number stack is:

Iteration # 14

Symmetry #1

2-way Primes: 2

Symmetry #2

2-way Primes: 3

Symmetry #1

2-way Primes: 3

Cross Symmetry #1

2-way Primes: 3

Cross Symmetry #1

2-way Primes: 3

Symmetry #2

2-way Primes: 6

Cross Symmetry #1

2-way Primes: 3

Symmetry #1

2-way Primes: 4

Cross Symmetry #2

2-way Primes: 4

Symmetry #1

2-way Primes: 5

Cross Symmetry #1

2-way Primes: 4

Symmetry #1

2-way Primes: 2

Cross Symmetry #1

2-way Primes: 2

Cross Symmetry #2

2-way Primes: 4

Symmetry #1

2-way Primes: 4

Symmetry #2

Cross Symmetry #2

2-way Primes: 4

Cross Symmetry #1

2-way Primes: 2

Symmetry #2

2-way Primes: 2

Cross Symmetry #1

2-way Primes: 4

Symmetry #2

2-way Primes: 5

Cross Symmetry #2

2-way Primes: 4

Symmetry #2

2-way Primes: 4

Cross Symmetry #1

2-way Primes: 3

Symmetry #2

2-way Primes: 6

Symmetry #1

2-way Primes: 3 Cross Symmetry #1 2-way Primes: Symmetry #2 2-way Primes: 3 Symmetry #1 2-way Primes: Symmetry #2 2-way Primes: Number stack is: Iteration # 15 Cross Symmetry #1 2-way Primes: 2 Cross Symmetry #2 2-way Primes: 3 Symmetry #2 2-way Primes: 3 Cross Symmetry #1

2-way Primes: 2

2-way Primes: 2

Symmetry #1

2-way Primes: 4

Symmetry #1

2-way Primes: 3

Cross Symmetry #2

2-way Primes: 4

Symmetry #1

2-way Primes: 6

Cross Symmetry #1

2-way Primes: 6

Symmetry #1

2-way Primes: 4

Symmetry #1

2-way Primes: 4

Symmetry #1

2-way Primes: 6

Cross Symmetry #2

2-way Primes: 6

Symmetry #2

2-way Primes: 6

Symmetry #2

2-way Primes: 4

Symmetry #2

2-way Primes: 4

Cross Symmetry #1

2-way Primes: 6

Symmetry #2

2-way Primes: 6

Cross Symmetry #2

2-way Primes: 4

Symmetry #2

2-way Primes: 3

Symmetry #2

2-way Primes: 4

Symmetry #1

2-way Primes: 2

Symmetry #1

2-way Primes: 3

Cross Symmetry #2

2-way Primes: 3

Cross Symmetry #1

2-way Primes: 2

Cross Symmetry #2

2-way Primes: 7

Cross Symmetry #1

2-way Primes: 3

Cross Symmetry #1

2-way Primes: 3 Number stack is:

Iteration # 16

Cross Symmetry #2

2-way Primes: 7

Symmetry #2

2-way Primes: 2

Symmetry #1

2-way Primes: 8

Cross Symmetry #2

2-way Primes: 5

Symmetry #1

2-way Primes: 0

Symmetry #1

2-way Primes: 5

Cross Symmetry #1

2-way Primes: 5

Cross Symmetry #2

2-way Primes: 5

Symmetry #2

2-way Primes: 4

Symmetry #1

2-way Primes: 5

Cross Symmetry #1

2-way Primes: 5

Symmetry #1

2-way Primes: 3

Cross Symmetry #2

2-way Primes: 3

Cross Symmetry #1

2-way Primes: 1

Cross Symmetry #2

2-way Primes: 3

Symmetry #2

2-way Primes: 3

Symmetry #2

2-way Primes: 4

Cross Symmetry #1

2-way Primes: 5

Symmetry #2

2-way Primes: 5

Symmetry #1

2-way Primes: 4

Cross Symmetry #1

Cross Symmetry #2

2-way Primes: 5

Symmetry #2

2-way Primes: 5

Symmetry #2

2-way Primes: 0

Cross Symmetry #2

2-way Primes: 5

Symmetry #2

2-way Primes: 8

Cross Symmetry #1

2-way Primes: 8

Symmetry #1

2-way Primes: 2

Cross Symmetry #2

2-way Primes: 7

Symmetry #1

2-way Primes: 7

Cross Symmetry #2

2-way Primes: 7

Symmetry #2

2-way Primes: 4

Cross Symmetry #2

2-way Primes: 7 Number stack is:

Iteration # 17

Cross Symmetry #2

2-way Primes: 2

Symmetry #2

2-way Primes: 7

Symmetry #2

2-way Primes: 8

Symmetry #1

2-way Primes: 3

Cross Symmetry #1

2-way Primes: 3

Symmetry #1

2-way Primes: 5

Symmetry #1

2-way Primes: 3

Symmetry #2

2-way Primes: 3

Symmetry #2

2-way Primes: 5

Symmetry #2

2-way Primes: 5

Cross Symmetry #1

2-way Primes: 3

Symmetry #2

2-way Primes: 3

Symmetry #1

2-way Primes: 8

Symmetry #1

2-way Primes: 7

Cross Symmetry #2

2-way Primes: 2

Symmetry #2

2-way Primes: 7 Number stack is :

Iteration # 18

Symmetry #1

2-way Primes: 7

Cross Symmetry #1

2-way Primes: 4

Symmetry #1

2-way Primes: 7

Cross Symmetry #2

2-way Primes: 4

Symmetry #1

2-way Primes: 7

Cross Symmetry #1

2-way Primes: 7

Cross Symmetry #2

2-way Primes: 6

Cross Symmetry #2

2-way Primes: 4

Symmetry #1

2-way Primes: 3

Cross Symmetry #1

2-way Primes: 6

Symmetry #2

2-way Primes: 6

Symmetry #1

2-way Primes: 6

Cross Symmetry #1

2-way Primes: 6

Symmetry #2

2-way Primes: 3

Cross Symmetry #2

2-way Primes: 4

Symmetry #1

2-way Primes: 6

Cross Symmetry #1

Cross Symmetry #2

2-way Primes: 6

Symmetry #2

2-way Primes: 7

Cross Symmetry #2

2-way Primes: 4

Symmetry #2

2-way Primes: 7

Cross Symmetry #1

2-way Primes: 4

Symmetry #2

2-way Primes: 7

Number stack is:

Iteration # 19

Cross Symmetry #2

2-way Primes: 4

Symmetry #2

2-way Primes: 6

Cross Symmetry #2

2-way Primes: 4

Cross Symmetry #1

2-way Primes: 7

Cross Symmetry #2

2-way Primes: 3

Symmetry #2

2-way Primes: 5

Symmetry #1

2-way Primes: 3

Cross Symmetry #1

2-way Primes: 3

Symmetry #1

2-way Primes: 6

Cross Symmetry #2

2-way Primes: 4

Symmetry #1

2-way Primes: 6

Symmetry #2

Cross Symmetry #2

2-way Primes: 4

Symmetry #2

2-way Primes: 6

Cross Symmetry #1

2-way Primes: 3

Symmetry #2

2-way Primes: 3

Symmetry #1

2-way Primes: 5

Cross Symmetry #2

2-way Primes: 3

Cross Symmetry #1

2-way Primes: 7

Symmetry #1

2-way Primes: 4

Cross Symmetry #2

2-way Primes: 7

Symmetry #1

2-way Primes: 6

Symmetry #2

2-way Primes: 3

Symmetry #1

2-way Primes: 3 Number stack is:

Iteration # 20

Symmetry #1

2-way Primes: 5

Cross Symmetry #1

2-way Primes: 2

Cross Symmetry #2

2-way Primes: 6

Symmetry #2

2-way Primes: 4

Cross Symmetry #2

2-way Primes: 4

Symmetry #2

2-way Primes: 4

Cross Symmetry #1

2-way Primes: 5

Symmetry #1

2-way Primes: 2

Cross Symmetry #1

2-way Primes: 4

Cross Symmetry #2

2-way Primes: 3

Symmetry #1

2-way Primes: 3

Cross Symmetry #2

2-way Primes: 8

Cross Symmetry #2

2-way Primes: 6

Symmetry #1

2-way Primes: 5

Cross Symmetry #1

2-way Primes: 4

Cross Symmetry #1

2-way Primes: 3

Cross Symmetry #2

2-way Primes: 3

Symmetry #2

2-way Primes: 3

Cross Symmetry #1

2-way Primes: 4

Symmetry #2

2-way Primes: 5

Cross Symmetry #2

2-way Primes: 6

Cross Symmetry #2

2-way Primes: 8

Symmetry #2

2-way Primes: 3

Cross Symmetry #2

2-way Primes: 3

Cross Symmetry #1

2-way Primes: 2

Cross Symmetry #1

2-way Primes: 5

Symmetry #1

2-way Primes: 7

Symmetry #1

2-way Primes: 4

Cross Symmetry #2

2-way Primes: 4

Symmetry #1

2-way Primes: 4

Cross Symmetry #2

2-way Primes: 6

Cross Symmetry #1

2-way Primes: 2

Symmetry #2

2-way Primes: 5

Cross Symmetry #1

Cross Symmetry #2

2-way Primes: 4

Cross Symmetry #2

2-way Primes: 4

Cross Symmetry #1

2-way Primes: 3 Number stack is:

Iteration # 21

Symmetry #1

2-way Primes: 2

Cross Symmetry #1

2-way Primes: 5

Symmetry #2

2-way Primes: 5

Symmetry #1

2-way Primes: 5

Symmetry #1

2-way Primes: 3

Cross Symmetry #2

2-way Primes: 8

Cross Symmetry #2

2-way Primes: 3

Cross Symmetry #2

2-way Primes: 3

Symmetry #2

2-way Primes: 8

Cross Symmetry #2

2-way Primes: 7

Symmetry #2

2-way Primes: 3

Symmetry #2

2-way Primes: 5

Symmetry #1

2-way Primes: 5

Cross Symmetry #1

2-way Primes: 5

Symmetry #2

2-way Primes: 2

Cross Symmetry #2

2-way Primes: 6

Symmetry #1

2-way Primes: 4

Cross Symmetry #1

2-way Primes: 3

Symmetry #2

2-way Primes: 4 Number stack is:

Iteration # 22

Symmetry #2

2-way Primes: 5

Cross Symmetry #2

2-way Primes: 5

Symmetry #1

2-way Primes: 8

Cross Symmetry #2

2-way Primes: 6

Symmetry #1

2-way Primes: 1

Cross Symmetry #2

2-way Primes: 5

Cross Symmetry #1

2-way Primes: 5

Symmetry #1

2-way Primes: 5

Cross Symmetry #1

2-way Primes: 5

Cross Symmetry #1

2-way Primes: 5

Symmetry #2

2-way Primes: 5

Cross Symmetry #1

2-way Primes: 5

Cross Symmetry #2

2-way Primes: 5

Symmetry #1

2-way Primes: 3

Cross Symmetry #2

2-way Primes: 6

Symmetry #2

2-way Primes: 8

Cross Symmetry #2

2-way Primes: 5

Symmetry #1

2-way Primes: 5

Symmetry #1

2-way Primes: 6

Cross Symmetry #2

2-way Primes: 3

Symmetry #1

2-way Primes: 4

Cross Symmetry #2

2-way Primes: 3

Cross Symmetry #2

2-way Primes: 4 Number stack is:

Iteration # 23

Cross Symmetry #2

2-way Primes: 6

Symmetry #2

2-way Primes: 6

Symmetry #1

2-way Primes: 6

Symmetry #1

2-way Primes: 4

Cross Symmetry #1

2-way Primes: 4

Symmetry #1

2-way Primes: 4

Symmetry #1

2-way Primes: 5

Cross Symmetry #2

2-way Primes: 7

Symmetry #1

2-way Primes: 7

Cross Symmetry #2

2-way Primes: 4

Symmetry #2

2-way Primes: 5

Symmetry #2

2-way Primes: 4

Cross Symmetry #1

2-way Primes: 4

Symmetry #2

2-way Primes: 4

Symmetry #2

2-way Primes: 6

Symmetry #1

2-way Primes: 6

Cross Symmetry #2

2-way Primes: 3

Cross Symmetry #2

2-way Primes: 4

Cross Symmetry #2

2-way Primes: 4

Symmetry #2

2-way Primes: 3 Number stack is:

Iteration # 24

Symmetry #1

2-way Primes: 5

Cross Symmetry #1

2-way Primes: 5

Cross Symmetry #2

2-way Primes: 5

Symmetry #2

2-way Primes: 5

Cross Symmetry #2

2-way Primes: 5

Symmetry #2

2-way Primes: 5

Symmetry #1

2-way Primes: 4

Symmetry #1

2-way Primes: 4

Symmetry #1

2-way Primes: 6

Cross Symmetry #1

2-way Primes: 6

Cross Symmetry #1

2-way Primes: 1

Cross Symmetry #1

2-way Primes: 6

Symmetry #2

2-way Primes: 6

Symmetry #2

2-way Primes: 4

Symmetry #1

2-way Primes: 5

Cross Symmetry #2

2-way Primes: 5

Cross Symmetry #2

2-way Primes: 6

Symmetry #1

2-way Primes: 5

Cross Symmetry #2

2-way Primes: 5

Cross Symmetry #1

2-way Primes: 5

Symmetry #2

2-way Primes: 5 Number stack is:

Iteration # 25

Symmetry #2

2-way Primes: 5

Symmetry #1

2-way Primes: 5

Cross Symmetry #1

2-way Primes: 5

Cross Symmetry #2

2-way Primes: 3

Symmetry #1

2-way Primes: 4

Cross Symmetry #2

2-way Primes: 4

Symmetry #1

2-way Primes: 2

Symmetry #1

2-way Primes: 4

Symmetry #2

2-way Primes: 3

Cross Symmetry #2

2-way Primes: 6

Symmetry #1

2-way Primes: 6

Cross Symmetry #2

2-way Primes: 6

Symmetry #1

2-way Primes: 3

Symmetry #2

2-way Primes: 4

Symmetry #2

2-way Primes: 2

Cross Symmetry #2

2-way Primes: 4

Symmetry #2

2-way Primes: 4

Cross Symmetry #2

2-way Primes: 3

Cross Symmetry #1

2-way Primes: 5

Symmetry #2

2-way Primes: 9

Symmetry #1

2-way Primes: 5

Symmetry #1

2-way Primes: 5

Cross Symmetry #2

2-way Primes: 5

Cross Symmetry #1

2-way Primes: 6

Symmetry #2

2-way Primes: 4

Symmetry #2

2-way Primes: 3

Symmetry #1

2-way Primes: 3

Symmetry #1

2-way Primes: 4

Cross Symmetry #1

2-way Primes: 6 Number stack is:

Iteration # 26 Cross Symmetry #1 2-way Primes: Symmetry #2 2-way Primes: 1 Symmetry #1 2-way Primes: 3 Cross Symmetry #1 2-way Primes: 5 Cross Symmetry #2 2-way Primes: Symmetry #2 2-way Primes: 5 Symmetry #1 2-way Primes: Symmetry #1 2-way Primes: Symmetry #1

2-way Primes: 3

Cross Symmetry #1

2-way Primes: 5

Cross Symmetry #1

2-way Primes: 5

Cross Symmetry #1

2-way Primes: 3

Symmetry #2

2-way Primes: 5

Symmetry #2

2-way Primes: 2

Symmetry #2

2-way Primes: 4

Symmetry #1

2-way Primes: 5

Cross Symmetry #1

2-way Primes: 5

Cross Symmetry #2

2-way Primes: 2

Symmetry #1

2-way Primes: 1

Cross Symmetry #1

2-way Primes: 2

Symmetry #1

2-way Primes: 3

Cross Symmetry #2

2-way Primes: 3

Cross Symmetry #1

2-way Primes: 4

Symmetry #2

2-way Primes: 6

Symmetry #1

2-way Primes: 5

Cross Symmetry #2

2-way Primes: 4

Cross Symmetry #1

2-way Primes: 3

Cross Symmetry #1

Cross Symmetry #2

2-way Primes: 4

Symmetry #2

2-way Primes: 5

Symmetry #1

2-way Primes: 6

Cross Symmetry #1

2-way Primes: 4

Cross Symmetry #2

2-way Primes: 3

Symmetry #2

2-way Primes: 3 Number stack is:

Iteration # 27

Cross Symmetry #2

2-way Primes: 6

Symmetry #2

2-way Primes: 4

Cross Symmetry #2

Symmetry #1

2-way Primes: 5

Cross Symmetry #2

2-way Primes: 3

Symmetry #1

2-way Primes: 7

Cross Symmetry #2

2-way Primes: 2

Cross Symmetry #1

2-way Primes: 5

Cross Symmetry #2

2-way Primes: 2

Symmetry #2

2-way Primes: 2

Symmetry #2

2-way Primes: 2

Symmetry #1

2-way Primes: 2

Symmetry #1

2-way Primes: 2

Cross Symmetry #1

2-way Primes: 5

Cross Symmetry #2

2-way Primes: 2

Symmetry #2

2-way Primes: 7

Cross Symmetry #2

2-way Primes: 3

Symmetry #2

2-way Primes: 5

Cross Symmetry #2

2-way Primes: 4

Symmetry #1

2-way Primes: 4

Cross Symmetry #2

2-way Primes: 6

Symmetry #1

Symmetry #1 2-way Primes: 4 Cross Symmetry #2 2-way Primes: 5 Cross Symmetry #2 2-way Primes: 5 Symmetry #2 2-way Primes: Number stack is: Iteration # 28 Symmetry #1 2-way Primes: 5 Cross Symmetry #1 2-way Primes: 3 Symmetry #2 2-way Primes: 6 Symmetry #1 2-way Primes: 5

Cross Symmetry #2

2-way Primes: 6

Symmetry #1

2-way Primes: 6

Cross Symmetry #2

2-way Primes: 4

Cross Symmetry #1

2-way Primes: 1

Symmetry #1

2-way Primes: 2

Cross Symmetry #1

2-way Primes: 2

Cross Symmetry #1

2-way Primes: 1

Cross Symmetry #1

2-way Primes: 2

Symmetry #2

2-way Primes: 2

Cross Symmetry #1

2-way Primes: 1

Cross Symmetry #2

Symmetry #2

2-way Primes: 6

Symmetry #2

2-way Primes: 6

Cross Symmetry #2

2-way Primes: 4

Symmetry #2

2-way Primes: 5

Symmetry #1

2-way Primes: 6

Cross Symmetry #1

2-way Primes: 3

Symmetry #2

2-way Primes: 5

Symmetry #1

2-way Primes: 8

Symmetry #2

2-way Primes: 8 Number stack is:

 Iteration # 29

Cross Symmetry #1

2-way Primes: 5

Symmetry #2

2-way Primes: 6

Cross Symmetry #2

2-way Primes: 4

Symmetry #1

2-way Primes: 4

Cross Symmetry #1

2-way Primes: 6

Cross Symmetry #2

2-way Primes: 3

Symmetry #2

2-way Primes: 4

Symmetry #1

2-way Primes: 3

Symmetry #1

2-way Primes: 6

Cross Symmetry #1

Symmetry #2

2-way Primes: 4

Symmetry #2

2-way Primes: 4

Symmetry #1

2-way Primes: 4

Symmetry #1

2-way Primes: 4

Cross Symmetry #1

2-way Primes: 6

Symmetry #2

2-way Primes: 6

Symmetry #2

2-way Primes: 3

Symmetry #1

2-way Primes: 4

Cross Symmetry #1

2-way Primes: 6

Cross Symmetry #2

2-way Primes: 4

Cross Symmetry #2

2-way Primes: 4

Symmetry #1

2-way Primes: 6

Cross Symmetry #1

2-way Primes: 5

Symmetry #1

2-way Primes: 4

Cross Symmetry #2

2-way Primes: 5

Cross Symmetry #1

2-way Primes: 6

Symmetry #2

2-way Primes: 6

Cross Symmetry #2

2-way Primes: 3

Symmetry #1

2-way Primes: 6 Number stack is:

Iteration # 30

Cross Symmetry #1

2-way Primes: 2

Cross Symmetry #2

2-way Primes: 6

Cross Symmetry #1

2-way Primes: 6

Symmetry #2

2-way Primes: 4

Symmetry #1

2-way Primes: 5

Cross Symmetry #1

2-way Primes: 5

Cross Symmetry #1

2-way Primes: 4

Cross Symmetry #2

2-way Primes: 4

Cross Symmetry #1

2-way Primes: 5

Symmetry #2

2-way Primes: 5

Symmetry #1

2-way Primes: 4

Cross Symmetry #1

2-way Primes: 6

Cross Symmetry #2

2-way Primes: 6

Cross Symmetry #1

2-way Primes: 2

Symmetry #1

2-way Primes: 6

Symmetry #1

2-way Primes: 4

Cross Symmetry #2

2-way Primes: 7

Cross Symmetry #2

2-way Primes: 6

Symmetry #1

2-way Primes: 3

Symmetry #2

2-way Primes: 3

Cross Symmetry #2

2-way Primes: 6

Symmetry #2

2-way Primes: 6

Cross Symmetry #2

2-way Primes: 7

Symmetry #2

2-way Primes: 4 Number stack is:

Iteration # 31

Symmetry #1

2-way Primes: 4

Cross Symmetry #1

2-way Primes: 3

Symmetry #1

2-way Primes: 5

Cross Symmetry #1

2-way Primes: 5

Cross Symmetry #2

2-way Primes: 1

Symmetry #2

2-way Primes: 1

Cross Symmetry #2

2-way Primes: 4

Cross Symmetry #1

2-way Primes: 5

Cross Symmetry #1

2-way Primes: 4

Symmetry #2

2-way Primes: 7

Cross Symmetry #1

2-way Primes: 4

Cross Symmetry #1

2-way Primes: 5

Cross Symmetry #2

2-way Primes: 4

Symmetry #1

2-way Primes: 1

Cross Symmetry #1

2-way Primes: 5

Cross Symmetry #2

2-way Primes: 1

Symmetry #2

2-way Primes: 5

Cross Symmetry #1

2-way Primes: 3

Symmetry #2

2-way Primes: 6

Symmetry #2

2-way Primes: 2

Symmetry #1

2-way Primes: 7

Cross Symmetry #1

2-way Primes: 5

Cross Symmetry #1

2-way Primes: 6

Symmetry #2

2-way Primes: 4

Cross Symmetry #1

2-way Primes: 3

Symmetry #1

2-way Primes: 4

Cross Symmetry #1

2-way Primes: 6

Cross Symmetry #1

2-way Primes: 5

Symmetry #2

2-way Primes: 7 Number stack is: Iteration # 32

Cross Symmetry #2

2-way Primes: 6

Cross Symmetry #2

2-way Primes: 6

Symmetry #2

2-way Primes: 3

Symmetry #1

2-way Primes: 4

Symmetry #1

2-way Primes: 1

Cross Symmetry #2

2-way Primes: 3

Symmetry #1

2-way Primes: 6

Symmetry #1

2-way Primes: 7

Cross Symmetry #1

2-way Primes: 6

Symmetry #2

2-way Primes: 6

Cross Symmetry #1

2-way Primes: 5

Cross Symmetry #1

2-way Primes: 7

Cross Symmetry #2

2-way Primes: 5

Cross Symmetry #2

2-way Primes: 5

Cross Symmetry #1

2-way Primes: 7

Cross Symmetry #1

2-way Primes: 5

Symmetry #1

2-way Primes: 6

Cross Symmetry #1

2-way Primes: 7

Cross Symmetry #2

Symmetry #2

2-way Primes: 7

Symmetry #2

2-way Primes: 6

Cross Symmetry #2

2-way Primes: 3

Symmetry #2

2-way Primes: 1

Symmetry #2

2-way Primes: 4

Symmetry #1

2-way Primes: 3

Cross Symmetry #2

2-way Primes: 6

Cross Symmetry #2

2-way Primes: 6

Cross Symmetry #2

2-way Primes: 5

Symmetry #1

2-way Primes: 6

Cross Symmetry #1

2-way Primes: 4

Symmetry #2

2-way Primes: 6

Symmetry #1

2-way Primes: 6

Cross Symmetry #1

2-way Primes: 4

Symmetry #2

2-way Primes: 6

Symmetry #2

2-way Primes: 5 Number stack is:

Iteration # 33

Symmetry #1

2-way Primes: 3

Cross Symmetry #2

Symmetry #1

2-way Primes: 0

Cross Symmetry #2

2-way Primes: 3

Symmetry #1

2-way Primes: 3

Cross Symmetry #1

2-way Primes: 3

Cross Symmetry #1

2-way Primes: 5

Symmetry #1

2-way Primes: 5

Symmetry #2

2-way Primes: 5

Cross Symmetry #1

2-way Primes: 5

Cross Symmetry #1

2-way Primes: 3

Symmetry #2

2-way Primes: 3

Symmetry #2

2-way Primes: 0

Cross Symmetry #2

2-way Primes: 4

Symmetry #2

2-way Primes: 3

Cross Symmetry #2

2-way Primes: 5

Cross Symmetry #1

2-way Primes: 4

Symmetry #2

2-way Primes: 6

Symmetry #1

2-way Primes: 6

Cross Symmetry #1

2-way Primes: 4

Cross Symmetry #2

2-way Primes: 5 Number stack is : Iteration # 34 Cross Symmetry #2 2-way Primes: 0 Symmetry #1 2-way Primes: 3 Cross Symmetry #1 2-way Primes: 3 Symmetry #1 2-way Primes: 3 Cross Symmetry #2 2-way Primes: 3 Cross Symmetry #1 2-way Primes: 5 Symmetry #2 2-way Primes: 2 Cross Symmetry #1 2-way Primes: 6 Symmetry #1

2-way Primes: 3

Symmetry #2

2-way Primes: 4

Cross Symmetry #1

2-way Primes: 6

Symmetry #1

2-way Primes: 2

Cross Symmetry #1

2-way Primes: 5

Cross Symmetry #2

2-way Primes: 3

Symmetry #2

2-way Primes: 3

Cross Symmetry #1

2-way Primes: 3

Symmetry #2

2-way Primes: 3

Cross Symmetry #2

2-way Primes: 0

Cross Symmetry #2

Cross Symmetry #1

2-way Primes: 6

Symmetry #1

2-way Primes: 6

Cross Symmetry #2

2-way Primes: 4

Cross Symmetry #2

2-way Primes: 4

Symmetry #2

2-way Primes: 6

Cross Symmetry #1

2-way Primes: 6 Number stack is:

Iteration # 35

Cross Symmetry #2

2-way Primes: 3

Symmetry #2

2-way Primes: 3

Cross Symmetry #1

2-way Primes: 7

Symmetry #1

2-way Primes: 5

Symmetry #1

2-way Primes: 3

Symmetry #2

2-way Primes: 3

Symmetry #2

2-way Primes: 5

Cross Symmetry #1

2-way Primes: 7

Symmetry #2

2-way Primes: 4

Symmetry #1

2-way Primes: 3

Cross Symmetry #2

2-way Primes: 3

Cross Symmetry #1

2-way Primes: 6

Symmetry #1

2-way Primes: 5

Cross Symmetry #1

2-way Primes: 6

Symmetry #2

2-way Primes: 6

Symmetry #1

2-way Primes: 6

Cross Symmetry #2

2-way Primes: 4

Cross Symmetry #2

2-way Primes: 4

Symmetry #2

2-way Primes: 6

Symmetry #1

2-way Primes: 6

Cross Symmetry #1

Symmetry #2

2-way Primes: 5

Cross Symmetry #1

2-way Primes: 6

Cross Symmetry #2

2-way Primes: 6 Number stack is:

Iteration # 36

Symmetry #1

2-way Primes: 3

Cross Symmetry #1

2-way Primes: 3

Symmetry #2

2-way Primes: 4

Cross Symmetry #1

2-way Primes: 4

Symmetry #2

2-way Primes: 5

Symmetry #1

2-way Primes: 3

Symmetry #2

2-way Primes: 8

Symmetry #1

2-way Primes: 5

Cross Symmetry #1

2-way Primes: 4

Symmetry #1

2-way Primes: 4

Cross Symmetry #1

2-way Primes: 3

Symmetry #2

2-way Primes: 3

Symmetry #2

2-way Primes: 6

Symmetry #1

2-way Primes: 6

Symmetry #1

2-way Primes: 6

Cross Symmetry #1

2-way Primes: 6

Symmetry #2

2-way Primes: 4

Symmetry #1

2-way Primes: 4

Cross Symmetry #1

2-way Primes: 6

Cross Symmetry #2

2-way Primes: 6

Symmetry #2

2-way Primes: 4

Symmetry #2

2-way Primes: 6

Symmetry #1

2-way Primes: 6 Number stack is:

Iteration # 37

2-way Primes: 3

Symmetry #2

2-way Primes: 7

Cross Symmetry #2

2-way Primes: 3

Symmetry #2

2-way Primes: 3

Symmetry #1

2-way Primes: 3

Cross Symmetry #1

2-way Primes: 4

Cross Symmetry #1

2-way Primes: 9

Symmetry #1

2-way Primes: 4

Cross Symmetry #2

2-way Primes: 6

Symmetry #1

2-way Primes: 6

Cross Symmetry #1

2-way Primes: 8

Symmetry #2

2-way Primes: 6

Cross Symmetry #2

2-way Primes: 6

Symmetry #2

2-way Primes: 4

Cross Symmetry #1

2-way Primes: 9

Cross Symmetry #1

2-way Primes: 4

Symmetry #2

2-way Primes: 3

Symmetry #1

2-way Primes: 3

Cross Symmetry #2

2-way Primes: 3

Symmetry #1

Cross Symmetry #2

2-way Primes: 3

Cross Symmetry #2

2-way Primes: 5

Cross Symmetry #1

2-way Primes: 5

Cross Symmetry #1

2-way Primes: 4

Symmetry #2

2-way Primes: 6

Symmetry #1

2-way Primes: 6

Cross Symmetry #1

2-way Primes: 4

Cross Symmetry #1

2-way Primes: 5

Cross Symmetry #2

2-way Primes: 5 Number stack is:

 Iteration # 38

Cross Symmetry #2

2-way Primes: 2

Cross Symmetry #2

2-way Primes: 3

Symmetry #1

2-way Primes: 6

Cross Symmetry #2

2-way Primes: 4

Cross Symmetry #2

2-way Primes: 5

Symmetry #2

2-way Primes: 5

Symmetry #1

2-way Primes: 7

Cross Symmetry #1

2-way Primes: 6

Cross Symmetry #1

2-way Primes: 1

Cross Symmetry #1

Symmetry #2

2-way Primes: 7

Symmetry #1

2-way Primes: 5

Cross Symmetry #2

2-way Primes: 5

Cross Symmetry #2

2-way Primes: 4

Symmetry #2

2-way Primes: 6

Cross Symmetry #2

2-way Primes: 3

Cross Symmetry #2

2-way Primes: 2

Symmetry #2

2-way Primes: 6

Symmetry #1

2-way Primes: 6

Number stack is:

Iteration # 39

2-way Primes: 5

Symmetry #1

2-way Primes: 5

Cross Symmetry #1

2-way Primes: 5

Symmetry #1

2-way Primes: 5

Cross Symmetry #2

2-way Primes: 4

Cross Symmetry #1

2-way Primes: 4

Cross Symmetry #1

2-way Primes: 4

Cross Symmetry #2

2-way Primes: 4

Symmetry #2

2-way Primes: 5

Cross Symmetry #1

Symmetry #2

2-way Primes: 5

Cross Symmetry #2

2-way Primes: 5

Cross Symmetry #2

2-way Primes: 6

Cross Symmetry #1

2-way Primes: 4

Symmetry #2

2-way Primes: 6

Symmetry #1

2-way Primes: 6

Cross Symmetry #2

2-way Primes: 6

Cross Symmetry #2

2-way Primes: 6

Symmetry #2

2-way Primes: 6

Symmetry #1

2-way Primes: 6

Cross Symmetry #2

2-way Primes: 6 Number stack is:

Iteration # 40

Cross Symmetry #2

2-way Primes: 1

Symmetry #2

2-way Primes: 6

Cross Symmetry #2

2-way Primes: 6

Symmetry #2

2-way Primes: 5

Symmetry #1

2-way Primes: 7

Cross Symmetry #2

2-way Primes: 4

Symmetry #2

2-way Primes: 1

Symmetry #1

Cross Symmetry #1

2-way Primes: 5

Symmetry #2

2-way Primes: 4

Cross Symmetry #1

2-way Primes: 2

Symmetry #1

2-way Primes: 4

Cross Symmetry #1

2-way Primes: 5

Symmetry #2

2-way Primes: 8

Symmetry #1

2-way Primes: 1

Cross Symmetry #2

2-way Primes: 4

Symmetry #2

2-way Primes: 7

Symmetry #1

Cross Symmetry #2

2-way Primes: 6

Symmetry #1

2-way Primes: 6

Cross Symmetry #2

2-way Primes: 1

Cross Symmetry #1

2-way Primes: 6

Cross Symmetry #1

2-way Primes: 6

Symmetry #2

2-way Primes: 6

Symmetry #1

2-way Primes: 6

Cross Symmetry #1

2-way Primes: 6

Cross Symmetry #1

2-way Primes: 6 Number stack is:

 Iteration # 41

Symmetry #1

2-way Primes: 3

Cross Symmetry #1

2-way Primes: 5

Cross Symmetry #2

2-way Primes: 4

Symmetry #1

2-way Primes: 1

Cross Symmetry #2

2-way Primes: 3

Cross Symmetry #1

2-way Primes: 2

Cross Symmetry #1

2-way Primes: 8

Cross Symmetry #1

2-way Primes: 4

Symmetry #2

2-way Primes: 4

Symmetry #1

2-way Primes: 4

Cross Symmetry #1

2-way Primes: 8

Cross Symmetry #1

2-way Primes: 2

Cross Symmetry #2

2-way Primes: 3

Symmetry #2

2-way Primes: 1

Cross Symmetry #2

2-way Primes: 4

Cross Symmetry #1

2-way Primes: 5

Symmetry #2

2-way Primes: 3

Cross Symmetry #1

2-way Primes: 6

Symmetry #1

2-way Primes: 9 Cross Symmetry #1 2-way Primes: 0 Cross Symmetry #2 2-way Primes: 0 Symmetry #2 2-way Primes: Symmetry #2 2-way Primes: 5 Cross Symmetry #1 2-way Primes: 6 Number stack is: 48756882642021982238803340141299570863068666251555758686744037580433610426404458 Iteration # 42 Symmetry #1 2-way Primes: 3 Cross Symmetry #2 2-way Primes: 7

Symmetry #1

Cross Symmetry #2

Symmetry #2

2-way Primes: 4

Symmetry #2

2-way Primes: 5

Cross Symmetry #1

2-way Primes: 2

Cross Symmetry #1

2-way Primes: 7

Symmetry #2

2-way Primes: 1

Symmetry #1

2-way Primes: 1

Cross Symmetry #1

2-way Primes: 7

Cross Symmetry #1

2-way Primes: 2

Symmetry #1

2-way Primes: 5

Symmetry #1

2-way Primes: 4

Cross Symmetry #2

2-way Primes: 7

Symmetry #2

2-way Primes: 3

Symmetry #1

2-way Primes: 6

Cross Symmetry #2

2-way Primes: 4

Symmetry #2

2-way Primes: 6

Cross Symmetry #1

2-way Primes: 5

Symmetry #1

2-way Primes: 0

Cross Symmetry #1

2-way Primes: 9

Cross Symmetry #2

2-way Primes: 9

Symmetry #2

Symmetry #1

2-way Primes: 0

Cross Symmetry #1

2-way Primes: 9

Cross Symmetry #2

2-way Primes: 9

Symmetry #2

2-way Primes: 0

Cross Symmetry #1

2-way Primes: 5

Symmetry #1

2-way Primes: 6 Number stack is:

Iteration # 43

Symmetry #1

2-way Primes: 7

Cross Symmetry #2

2-way Primes: 4

Symmetry #2

Cross Symmetry #2

2-way Primes: 2

Symmetry #1

2-way Primes: 2

Cross Symmetry #1

2-way Primes: 5

Symmetry #2

2-way Primes: 4

Cross Symmetry #1

2-way Primes: 6

Cross Symmetry #2

2-way Primes: 2

Cross Symmetry #1

2-way Primes: 5

Cross Symmetry #1

2-way Primes: 5

Cross Symmetry #2

2-way Primes: 2

Cross Symmetry #1

Symmetry #1

2-way Primes: 4

Cross Symmetry #1

2-way Primes: 5

Symmetry #2

2-way Primes: 2

Cross Symmetry #2

2-way Primes: 2

Symmetry #1

2-way Primes: 5

Cross Symmetry #2

2-way Primes: 4

Symmetry #2

2-way Primes: 7

Cross Symmetry #2

2-way Primes: 2

Symmetry #1

2-way Primes: 3

Cross Symmetry #2

```
Symmetry #1

2-way Primes: 4

Cross Symmetry #2

2-way Primes: 6

Symmetry #1

2-way Primes: 9

Cross Symmetry #1

2-way Primes: 0

Cross Symmetry #2

2-way Primes: 0

Symmetry #2

2-way Primes: 9

Cross Symmetry #2

2-way Primes: 9
```

Cross Symmetry #2

2-way Primes: 6

Symmetry #2

Symmetry #2

2-way Primes: 3 Number stack is:

75688264202198223880334014129957086306866625155575868674403758043361042640445859

Iteration # 44 Symmetry #1 2-way Primes: 6 Cross Symmetry #1 2-way Primes: 3 Cross Symmetry #2 2-way Primes: Symmetry #1 2-way Primes: 5 Symmetry #1 2-way Primes: 9 Cross Symmetry #1 2-way Primes: 0 Cross Symmetry #2 2-way Primes: 0 Symmetry #2 2-way Primes: 9 Symmetry #2

2-way Primes: 5

Cross Symmetry #1

2-way Primes: 3

Symmetry #2

2-way Primes: 6

Cross Symmetry #2

2-way Primes: 5

Cross Symmetry #2

2-way Primes: 4

Symmetry #2

2-way Primes: 6

Symmetry #1

2-way Primes: 6

Cross Symmetry #1

2-way Primes: 4

Symmetry #2

2-way Primes: 6

Symmetry #1

2-way Primes: 6

Symmetry #2

2-way Primes: 6

Symmetry #1

2-way Primes: 6

Cross Symmetry #2

2-way Primes: 4 Number stack is:

Iteration # 45

Cross Symmetry #2

2-way Primes: 6

Symmetry #2

2-way Primes: 6

Symmetry #1

2-way Primes: 6

Symmetry #1

2-way Primes: 5

Cross Symmetry #1

2-way Primes: 5

Symmetry #2

2-way Primes: 1

Cross Symmetry #2

2-way Primes: 4

Symmetry #1

2-way Primes: 4

Cross Symmetry #1

2-way Primes: 3

Cross Symmetry #1

2-way Primes: 3

Symmetry #2

2-way Primes: 4

Cross Symmetry #2

2-way Primes: 4

Symmetry #1

2-way Primes: 1

Cross Symmetry #1

2-way Primes: 5

Cross Symmetry #2

Symmetry #2

2-way Primes: 5

Symmetry #2

2-way Primes: 6

Symmetry #1

2-way Primes: 6

Cross Symmetry #2

2-way Primes: 6

Symmetry #1

2-way Primes: 2

Cross Symmetry #2

2-way Primes: 6

Cross Symmetry #2

2-way Primes: 0

Symmetry #1

2-way Primes: 6

Cross Symmetry #1

2-way Primes: 6

Symmetry #1

2-way Primes: 6

Cross Symmetry #2

2-way Primes: 7

Symmetry #2

2-way Primes: 6

Symmetry #1

2-way Primes: 6

Cross Symmetry #1

2-way Primes: 6

Cross Symmetry #2

2-way Primes: 7

Symmetry #2

2-way Primes: 7

Cross Symmetry #1

2-way Primes: 6

Symmetry #2

2-way Primes: 6

Cross Symmetry #2

2-way Primes: 0 Number stack is:

68826420219822388033401412995708630686662515557586867440375804336104264044585953

Iteration # 46

Symmetry #1

2-way Primes: 5

Cross Symmetry #1

2-way Primes: 5

Cross Symmetry #2

2-way Primes: 3

Cross Symmetry #2

2-way Primes: 6

Symmetry #1

2-way Primes: 3

Symmetry #1

2-way Primes: 2

Symmetry #2

2-way Primes: 4

Cross Symmetry #1

2-way Primes: 0

Symmetry #1

2-way Primes: 4

Symmetry #2

Symmetry #2

2-way Primes: 3

Cross Symmetry #2

2-way Primes: 6

Cross Symmetry #2

2-way Primes: 3

Cross Symmetry #1

2-way Primes: 5

Symmetry #2

2-way Primes: 5

Symmetry #1

2-way Primes: 3

Cross Symmetry #2

2-way Primes: 3

Cross Symmetry #1

2-way Primes: 6

Symmetry #2

2-way Primes: 1

Cross Symmetry #1

2-way Primes: 6

Symmetry #1

2-way Primes: 6

Cross Symmetry #1

2-way Primes: 7

Cross Symmetry #2

2-way Primes: 6

Symmetry #2

2-way Primes: 7

Symmetry #1

2-way Primes: 7

Cross Symmetry #1

2-way Primes: 7

Cross Symmetry #2

2-way Primes: 6

Symmetry #2

2-way Primes: 6

Cross Symmetry #1

Symmetry #1 2-way Primes: 1 Cross Symmetry #1 2-way Primes: 6 Cross Symmetry #2 2-way Primes: 3 Symmetry #2 2-way Primes: 3 Number stack is: 88264202198223880334014129957086306866625155575868674403758043361042640445859538 Iteration # 47 Symmetry #1 2-way Primes: 3 Cross Symmetry #2 2-way Primes: 3 Cross Symmetry #1

2-way Primes: 5

2-way Primes: 3

Symmetry #2

Cross Symmetry #2

2-way Primes: 2

Symmetry #2

2-way Primes: 4

Symmetry #1

2-way Primes: 4

Cross Symmetry #1

2-way Primes: 2

Symmetry #1

2-way Primes: 3

Cross Symmetry #1

2-way Primes: 5

Cross Symmetry #2

2-way Primes: 3

Symmetry #2

2-way Primes: 3

Symmetry #1

2-way Primes: 5

Cross Symmetry #2

Symmetry #2

2-way Primes: 4

Symmetry #1

2-way Primes: 6

Cross Symmetry #2

2-way Primes: 5

Symmetry #2

2-way Primes: 6

Symmetry #1

2-way Primes: 8

Cross Symmetry #1

2-way Primes: 4

Cross Symmetry #1

2-way Primes: 4

Symmetry #2

2-way Primes: 8

Symmetry #1

2-way Primes: 6

Cross Symmetry #2

2-way Primes: 5

Symmetry #2

Symmetry #1

2-way Primes: 4 Number stack is:

Iteration # 48

Cross Symmetry #1

2-way Primes: 5

Cross Symmetry #1

2-way Primes: 6

Symmetry #2

2-way Primes: 5

Symmetry #1

2-way Primes: 5

Cross Symmetry #1

2-way Primes: 6

Cross Symmetry #1

2-way Primes: 5

Cross Symmetry #2

2-way Primes: 3

Symmetry #1

Cross Symmetry #2

2-way Primes: 3

Symmetry #2

2-way Primes: 7

Cross Symmetry #2

2-way Primes: 5

Cross Symmetry #2

2-way Primes: 6

Symmetry #1

2-way Primes: 4

Cross Symmetry #1

2-way Primes: 8

Cross Symmetry #1

2-way Primes: 8

Symmetry #2

2-way Primes: 4

Cross Symmetry #2

2-way Primes: 6

Symmetry #1

2-way Primes: 7

Cross Symmetry #2

2-way Primes: 3

Symmetry #2

2-way Primes: 3 Number stack is:

Iteration # 49

Cross Symmetry #2

2-way Primes: 4

Symmetry #2

2-way Primes: 5

Cross Symmetry #1

2-way Primes: 4

Symmetry #2

2-way Primes: 4

Cross Symmetry #1

2-way Primes: 4

Symmetry #1

2-way Primes: 4

Cross Symmetry #1

2-way Primes: 4

Symmetry #1

2-way Primes: 5

Cross Symmetry #2

2-way Primes: 4

Cross Symmetry #2

2-way Primes: 3

Cross Symmetry #1

2-way Primes: 5

Symmetry #2

2-way Primes: 4

Cross Symmetry #2

2-way Primes: 9

Symmetry #2

2-way Primes: 6

Symmetry #1

Cross Symmetry #1

2-way Primes: 2

Cross Symmetry #2

2-way Primes: 6

Symmetry #2

2-way Primes: 2

Symmetry #1

2-way Primes: 3

Cross Symmetry #1

2-way Primes: 3

Cross Symmetry #2

2-way Primes: 3

Symmetry #2

2-way Primes: 3

Symmetry #1

2-way Primes: 2

Cross Symmetry #1

2-way Primes: 2

Cross Symmetry #2

Symmetry #1 2-way Primes: 6 Cross Symmetry #2 2-way Primes: 9 Symmetry #1 2-way Primes: 4 Cross Symmetry #1 2-way Primes: 5 Cross Symmetry #2 2-way Primes: 3 Number stack is: Iteration # 50 Symmetry #1 2-way Primes: 3

Symmetry #2

2-way Primes: 4

Cross Symmetry #1

2-way Primes: 3

2-way Primes: 5

Symmetry #1

Cross Symmetry #2

2-way Primes: 5

Cross Symmetry #2

2-way Primes: 2

Symmetry #2

2-way Primes: 5

Symmetry #1

2-way Primes: 5

Cross Symmetry #2

2-way Primes: 2

Cross Symmetry #2

2-way Primes: 5

Symmetry #2

2-way Primes: 5

Cross Symmetry #1

2-way Primes: 3

Symmetry #2

2-way Primes: 3

Symmetry #1

2-way Primes: 6

Symmetry #1

2-way Primes: 5

Cross Symmetry #1

2-way Primes: 7

Symmetry #1

2-way Primes: 2

Cross Symmetry #1

2-way Primes: 4

Cross Symmetry #2

2-way Primes: 2

Symmetry #2

2-way Primes: 6

Symmetry #1

2-way Primes: 6

Cross Symmetry #1

2-way Primes: 4

Cross Symmetry #2

2-way Primes: 2

Symmetry #2

Cross Symmetry #1

2-way Primes: 7

Symmetry #2

2-way Primes: 5

Cross Symmetry #2

2-way Primes: 7

Symmetry #2

2-way Primes: 6 Number stack is:

Iteration # 51

Cross Symmetry #2

2-way Primes: 4

Cross Symmetry #2

2-way Primes: 3

Symmetry #2

2-way Primes: 3

Symmetry #1

2-way Primes: 4

Symmetry #2

2-way Primes: 7

Symmetry #1

2-way Primes: 7

Cross Symmetry #1

2-way Primes: 8

Symmetry #2

2-way Primes: 4

Symmetry #1

2-way Primes: 3

Cross Symmetry #2

2-way Primes: 3

Cross Symmetry #2

2-way Primes: 4

Cross Symmetry #1

2-way Primes: 6

Symmetry #2

2-way Primes: 6

Symmetry #1

Cross Symmetry #1

2-way Primes: 2

Symmetry #1

2-way Primes: 7

Cross Symmetry #1

2-way Primes: 5

Symmetry #1

2-way Primes: 5

Cross Symmetry #1

2-way Primes: 5

Cross Symmetry #1

2-way Primes: 5

Symmetry #2

2-way Primes: 5

Cross Symmetry #1

2-way Primes: 5

Symmetry #2

2-way Primes: 7

Cross Symmetry #1

Symmetry #2

2-way Primes: 7

Symmetry #1

2-way Primes: 6

Cross Symmetry #1

2-way Primes: 6 Number stack is: