Polynomials Generating Prime Numbers No.3

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Abstract

In the previous research paper "[2476] viXra:2008.0044 submitted 2020.8.7 Polynomials Generating Prime Numbers No.2", I found many polynomials generating prime numbers, avoiding the value where the continuous prime number is interrupted in the prime numbers of vertical column of Euler's polynomial generating prime numbers to skip by 2 or 3 etc.. In this time, I also investigate polynomials generating prime numbers, avoiding the value where the continuous prime number is interrupted in the prime numbers of other famous polynomials generating prime numbers to skip by 2 or 3 etc..

As a result, I found many polynomials generating 29 to 10 consecutive prime numbers.

Contents 1

1 Introduction

I was interested in prime numbers looking at the Ulam spiral, I analyzed it myself. And I learned that Euler's polynomial generating prime numbers is simple and great.
In the previous research paper "[2476] viXra:2008.0044 submitted 2020.8.7 Polynomials Generating Prime Numbers No.2", I found many polynomials generating prime numbers, avoiding the value where the continuous prime number is interrupted in the prime numbers of vertical column of Euler's polynomial generating prime numbers to skip by 2 or 3 etc..
In this time, I also investigate polynomials generating prime numbers, avoiding the value where the continuous prime number is interrupted in the prime numbers of other famous polynomials generating prime numbers to skip by 2 or 3 etc.. As a result, I found many polynomials generating 29 to 10 consecutive prime numbers.

These algebraic polynomials have the property that for n = 0, 1, ..., m-1 value of the polynomial, eventually in module, are m primes.

2 New polynomials generating prime numbers

2.1 New polynomial generating prime numbers 1

The Fung and Ruby polynomial, $P(n) = | 36n^2 - 810n + 2753 |$, generates prime numbers up to n = 44, and is non-prime numbers at n = 45, 53, 54, 58. By 1 skipping, I calculate the polynomial of 36809 at n = 44, 41669 at n = 46, 46817 at n = 48, 52253 at n = 50, and 57977 at n = 52. The method of calculating polynomial is as follows.

36809 n=0

4860

41669 288 41669=36809+4860 n=1

=36809+4860x1

5148

46817 288 46817=(36809+4860)+(4860+288) n=2

=36809+4860x2+288x1

5436

52253 288 52253=(36809+4860)+(4860+288) +(4860+288+288) n=3

=36809+4860x3+288x3

5724

57977 57977=(36809+4860)+(4860+288) +(4860+288+288) n=4

+(4860+288+288+288) =36809+4860x4+288x6

$f(n)=36809+4860n+288xn(n-1)/2=36809+4860n+144n^2-144n$

$=144n^2+4716n+36809$

It can be confirmed later that this polynomial is prime numbers even if n = -1 to -24, so I insert n=n-24,

$f(n)=144(n-24)^2+4716(n-24)+36809=144n^2-144x2x24n+144x24x24+4716n-4716x24+36809$

$=144n^2-6912n+82944+4716n-113184+36809=144n^2-2196n+6569$ (n=0,1,...,28)

This is polynomial generating 29 prime numbers.

$P(n) = | 144n^2 - 2196n + 6569 |$, generates 29 primes: 6569, 4517, 2753, 1277, 89, |-811|, |-1423|, |-1747|, |-1783|, |-1531|, |-991|, |-163|, 953, 2357, 4049, 6029, 8297, 10853, 13697, 16829, 20249, 23957, 27953, 32237, 36809, 41669, 46817, 52253, 57977 .

2.2 New polynomial generating prime numbers 2

The Legendre polynomial, $P(n) = 29n^2 + 29$, generates prime numbers up to n = 28, and is non-prime numbers at n = 29, 30, 32, 35, 39. By 2 skipping, I calculate the polynomial of 1597 at n = 28, 1951 at n = 31, 2341 at n = 34, 2767 at n = 37, and 3229 at n = 40. The method of calculating polynomial is as follows.

1597				n=0
	354			
1951		36	1951=1597+354	n=1
	390		=1597+354x1	
2341		36	2341=(1597+354)+(354+36)	n=2
	426		=1597+354x2+36x1	
2767		36	2767=(1597+354)+(354+36) +(354+36+36)	n=3
	462		=1597+354x3+36x3	
3229			3229=(1597+354)+(354+36) +(354+36+36)	n=4
			+(354+36+36+36) =1597+354x4+36x6	

$f(n)=1597+354n+36xn(n-1)/2=1597+354n+18n^2-18n$

$=18n^2+336n+1597$

It can be confirmed later that this polynomial is prime numbers even if n = -1 to -18, so I insert n=n-18,

$f(n)=18(n-18)^2+336(n-18)+1597=18n^2-18x2x18n+18x18x18+336n-336x18+1597$

$=18n^2-648n+5832+336n-6048+1597=18n^2-312n+1381$ (n=0,1,...,22)

And it can be confirmed later that this polynomial is prime numbers even if n = 23 to 27.

This is polynomial generating 28 prime numbers.

$P(n) = 18n^2 - 312n + 1381$, generates 28 primes: 1381, 1087, 829, 607, 421, 271, 157, 79, 37, 31, 61, 127, 229, 367, 541, 751, 997, 1279, 1597, 1951, 2341, 2767, 3229, 3727, 4261, 4831, 5437, 6079 .

2.3 New polynomial generating prime numbers 3

The Beyleveld polynomial, $P(n) = | n^4 - 97n^3 + 3294n^2 - 45458n + 213589 |$, generates prime numbers up to n = 49, and is non-prime numbers at n = 50, 55, 56, 57, 58, 59. By 1 skipping, I calculate the polynomial of 99829 at n = 45, 162359 at n = 47, 247889 at n = 49, 360979 at n = 51, and 506573 at n = 53. The method of calculating polynomial is as follows.

56123				
	43706			
99829		18824		
	62530		4176	
162359		23000		384
	85530		4560	
247889		27560		384
	113090		4944	
360979		32504		
	145594			
506573				

56123 n=0

99829=56123+43706=56123+43706x1 n=1

162359=(56123+43706)+(43706+18824)=56123+43706x2+18824x1 n=2

247889=(56123+43706)+(43706+18824)+(43706+18824+18824+4176) n=3

=56123+43706x3+18824x3+4176x1

360979=(56123+43706)+(43706+18824)+(43706+18824+18824+4176)+113090 n=4

=(56123+43706)+(43706+18824)+(43706+18824+18824+4176)+(85530+27560)

=(56123+43706)+(43706+18824)+(43706+18824+18824+4176)+(62530+23000)+

+(23000+4560)

=(56123+43706)+(43706+18824)+(43706+18824+18824+4176)+(43706+18824 +18824+4176)+(18824+4176+4176+384)

=56123+43706x4+18824x6+4176x4+384x1

506573=56123+43706x4+18824x6+4176x4+384x1+145594 n=5

=56123+43706x4+18824x6+4176x4+384x1+(113090+32504)

= 56123+43706x4+18824x6+4176x4+384x1+(85530+27560)+(27560+4944)

= 56123+43706x4+18824x6+4176x4+384x1+(62530+23000)+(23000+4560) +(23000+4560)+(4560+384)

= 56123+43706x4+18824x6+4176x4+384x1+(43706+18824)+(18824+4176) +(18824+4176)+(4176+384)+(18824+4176)+(4176+384)+(4176+384)+384

= 56123+43706x5+18824x10+4176x10+384x5

f(n)=56123+43706n+18824xn(n-1)/2+4176xn(n-1)(n-2)/6+384xn(n-1)(n-2)(n-3)/24

(The n^3 term has a coefficient of 1/6 and the n^4 term has a coefficient of 1/24, but the explanation is omitted.)

It can be confirmed later that this polynomial is prime numbers even if n = -1 to -21 so I insert n=n-21,

f(n)=56123+43706(n-21)+18824(n-21)(n-22)/2+4176(n-21)(n-22)(n-23)/6+384(n-21)(n-22)(n-23)(n-24)/24=$16n^4-744n^3+12036n^2-78314n+171329$ (n=0,1,...,26)

This is polynomial generating 27 prime numbers.

$P(n) = | 16n^4 - 744n^3 + 12036n^2 - 78314n + 171329 |$, generates 27 primes: 171329, 104323, 57149, 25919, 7129, |-2341|, |-5227|, |-3881|, |-271|, 4019, 7789, 10223, 10889, 9739, 7109, 3719, 673, |-541|, 1949, 10399, 27449, 56123, 99829, 162359, 247889, 360979, 506573 .

2.4 New polynomial generating prime numbers 4

The Brox polynomial, $P(n) = 43n^2 - 537n + 2971$, generates prime numbers up to n = 34, and is non-prime numbers at n = 35, 41, 48, 52, 53, 54. By 1 skipping, I calculate the polynomial of 34421 at n = 34, 39367 at n = 36, 44657 at n = 38, 50291 at n = 40, and 56269 at n = 42. The method of calculating polynomial is as follows.

34421 n=0

4946

39367 344 39367=34421+4946 n=1

5290 =34421+4946x1

44657 344 44657=(34421+4946)+(4946+344) n=2

5634 =34421+4946x2+344x1

50291 344 50291=(34421+4946)+(4946+344) +(4946+344+344) n=3

5978 =34421+4946x3+344x3

56269 56269=(34421+4946)+(4946+344) +(4946+344+344) n=4

+(4946+344+344+344) =34421+4946x4+344x6

$f(n)=34421+4946n+344xn(n-1)/2=34421+4946n+172n^2-172n$

$=172n^2+4774n+34421$

It can be confirmed later that this polynomial is prime numbers even if n = -1 to -20, so I insert n=n-20,

$f(n)=172(n-20)^2+4774(n-20)+34421=172n^2-172x2x20n+172x20x20+4774n-4774x20+34421$

$=172n^2-6880n+68800+4774n-95480+34421=172n^2-2106n+7741$ (n=0,1,...,24)

And it can be confirmed later that this polynomial is prime numbers even if n = 25 to 26.

This is polynomial generating 27 prime numbers.

$P(n) = 172n^2 - 2106n + 7741$, generates 27 primes: 7741, 5807, 4217, 2971, 2069, 1511, 1297, 1427, 1901, 2719, 3881, 5387, 7237, 9431, 11969, 14851, 18077, 21647, 25561, 29819, 34421, 39367, 44657, 50291, 56269, 62591, 69257 .

2.5 New polynomial generating prime numbers 5

The Gobbo polynomial, $P(n) = | 8n^2 - 488n + 7243 |$, generates prime numbers up to n = 61, and is non-prime numbers at n = 62, 63, 69, 70. By 2 skipping, I calculate the polynomial of values at n = 55, 58, 61, 64, 67. Since the method of obtaining the polynomial is the same as the method described above, so I will omit below.

This is polynomial generating 23 prime numbers.

$P(n) = | 72n^2 - 1416n + 6763 |$, generates 23 primes: 6763, 5419, 4219, 3163, 2251, 1483, 859, 379, 43, |-149|, |-197|, |-101|, 139, 523, 1051, 1723, 2539, 3499, 4603, 5851, 7243, 8779, 10459 .

2.6 New polynomial generating prime numbers 6

The Brox polynomial, $P(n) = 6n^2 - 342n + 4903$ (or $6n^2 + 6n + 31$), generates prime numbers up to n = 28, and is non-prime numbers at n = 29, 30, 31, 34, 36, 41, 44, 51, 55.

By 4 skipping, I calculate the polynomial of values at n = 28, 33, 38, 43, 48, 53.

This is polynomial generating 23 prime numbers.
$P(n) = 150n^2 - 1590n + 4243$, generates 23 primes: 4243, 2803, 1663, 823, 283, 43, 103, 463, 1123, 2083, 3343, 4903, 6763, 8923, 11383, 14143, 17203, 20563, 24223, 28183, 32443, 37003, 41863 .

2.7 New polynomial generating prime numbers 7

The Fung and Ruby polynomial, $P(n) = | 36n^2 - 810n + 2753 |$, generates prime numbers up to n = 44, and is non-prime numbers at n = 45, 53, 54, 58, 60, 63, 67, 68. By 4 skipping, I calculate the polynomial of values at n = 46, 51, 56, 61, 66.

This is polynomial generating 22 prime numbers.
$P(n) = | 900n^2 - 16290n + 71909 |$, generates 22 primes: 71909, 56519, 42929, 31139, 21149, 12959, 6569, 1979, |-811|, |-1801|, |-991|, 1619, 6029, 12239, 20249, 30059, 41669, 55079, 70289, 87299, 106109, 126719 .

2.8 New polynomial generating prime numbers 8

The Brox polynomial, $P(n) = 43n^2 - 537n + 2971$, generates prime numbers up to n = 34, and is non-prime numbers at n = 35, 41, 48, 52, 53, 54. By 2 skipping, I calculate the polynomial of values at n = 33, 36, 39, 42, 45.

This is polynomial generating 20 prime numbers.
$P(n) = 387n^2 - 4707n + 15607$, generates 20 primes: 15607, 11287, 7741, 4969, 2971, 1747, 1297, 1621, 2719, 4591, 7237, 10657, 14851, 19819, 25561, 32077, 39367, 47431, 56269, 65881 .

2.9 New polynomial generating prime numbers 9

The Speiser polynomial, $P(n) = | 103n^2 - 4707n + 50383 |$, generates prime numbers up to n = 42, and is non-prime numbers at n = 43, 46, 48, 55, 56, 58, 62. By 3 skipping, I calculate the polynomial of values at n = 45, 49, 53, 57, 61.

This is polynomial generating 20 prime numbers.

$P(n) = | 1648n^2 - 18004n + 45779 |$, generates 20 primes: 45779, 29423, 16363, 6599, 131, |-3041|, |-2917|, 503, 7219, 17231, 30539, 47143, 67043, 90239, 116731, 146519, 179603, 215983, 255659, 298631 .

2.10 Other new polynomials generating prime numbers

2.10.1 Gobbo polynomial, $P(n) = | 8n^2 - 488n + 7243 |$, is non-prime numbers at n= 62, 63, 69, 70. By 3 skipping, I calculate the polynomial including values at n = 61.

This is polynomial generating 18 prime numbers.

$P(n) = | 128n^2 - 2144n + 8779 |$, generates 18 primes: 8779, 6763, 5003, 3499, 2251, 1259, 523, 43, |-181|, |-149|, 139, 683, 1483, 2539, 3851, 5419, 7243, 9323 .

2.10.2 Gobbo polynomial, $P(n) = | 8n^2 - 488n + 7243 |$, is non-prime numbers at n= 62, 63, 69, 70. By 3 skipping, I calculate the polynomial including values at n = 60.

This is polynomial generating 18 prime numbers.
$P(n) = | 128n^2 - 2208n + 9323 |$, generates 18 primes: 9323, 7243, 5419, 3851, 2539, 1483, 683, 139, |-149|, |-181|, 43, 523, 1259, 2251, 3499, 5003, 6763, 8779 .
Note that the above values are the same as in Section 2.10.1 and they will appear in reverse order, like mirror.

2.10.3 Brox polynomial, $P(n) = 43n^2 - 537n + 2971$, is non-prime numbers at n= 35, 41, 48, 52, 53, 54. By 2 skipping, I calculate the polynomial including values at n = 34.

This is polynomial generating 18 prime numbers.

$P(n) = 387n^2 - 2127n + 4217$, generates 18 primes: 4217, 2477, 1511, 1319, 1901, 3257, 5387, 8291, 11969, 16421, 21647, 27647, 34421, 41969,50291, 59387, 69257, 79901 .

2.10.4 Speiser polynomial, $P(n) = | 103n^2 - 4707n + 50383 |$, is non-prime numbers at n= 43, 46, 48, 55, 56. By 2 skipping, I calculate the polynomial including values at n = 44.

This is polynomial generating 18 prime numbers.
$P(n) = | 927n^2 - 12885n + 41381 |$, generates 18 primes: 41381, 29423, 19319, 11069, 4673, 131, |-2557|, |-3391|, |-2371|, 503, 5231, 11813, 20249, 30539, 42683, 56681, 72533,

90239 .

2.10.5 Brox polynomial, $P(n) = 43n^2 - 537n + 2971$, is non-prime numbers at n= 35, 41, 48, 52, 53, 54. By 5 skipping, I calculate the polynomial including values at n = 38.

This is polynomial generating 18 prime numbers.
$P(n) = 1548n^2 - 26958n + 118661$, generates 18 primes: 118661, 93251, 70937, 51719, 35597, 22571, 12641, 5807, 2069, 1427, 3881, 9431, 18077, 29819, 44657, 62591, 83621, 107747 .

2.10.6 Legendre polynomial, $P(n) = 2n^2 + 29$, is non-prime numbers at n= 29, 30, 32, 35, 39. By 4 skipping, I calculate the polynomial including values at n = 31.

This is polynomial generating 17 prime numbers.
$P(n) = 50n^2 - 480n + 1181$, generates 17 primes: 1181, 751, 421, 191, 61, 31, 101, 271, 541, 911, 1381, 1951, 2621, 3391, 4261, 5231, 6301 .

2.10.7 Legendre polynomial, $P(n) = 2n^2 + 29$, is non-prime numbers at n= 29, 30, 32, 35, 39. By 4 skipping, I calculate the polynomial including values at n = 33.

This is polynomial generating 17 prime numbers.
$P(n) = 50n^2 - 540n + 1487$, generates 17 primes: 1487, 997, 607, 317, 127, 37, 47, 157, 367, 677, 1087, 1597, 2207, 2917, 3727, 4637, 5647 .

2.10.8 Bruno polynomial, $P(n) = | 3n^2 + 39n + 37 |$, is non-prime numbers at n= 18, 24, 27, 28, 36, 37. By 4 skipping, I calculate the polynomial including values at n = 20.

This is polynomial generating 17 prime numbers.
$P(n) = | 75n^2 - 855n + 2347 |$, generates 17 primes: 2347, 1567, 937, 457, 127, $|-53|$, $|-83|$, 37, 307, 727, 1297, 2017, 2887, 3907, 5077, 6397, 7867 .

2.10.9 Gobbo polynomial, $P(n) = | 7n^2 - 371n + 4871 |$, is non-prime numbers at n= 54, 57, 58, 60, 62. By 3 skipping, I calculate the polynomial including values at n = 55.

This is polynomial generating 17 prime numbers.
$P(n) = | 112n^2 - 1316n + 3821 |$, generates 17 primes: 3821, 2617, 1637, 881, 349, 41, $|-43|$, 97, 461, 1049, 1861, 2897, 4157, 5641, 7349, 9281, 11437 .

2.10.10 Brox polynomial, $P(n) = 43n^2 - 537n + 2971$, is non-prime numbers at n= 35, 41, 48, 52, 53, 54. By 3 skipping, I calculate the polynomial including values at n = 38.

This is polynomial generating 17 prime numbers.
$P(n) = 688n^2 - 6964n + 18917$, generates 17 primes: 18917, 12641, 7741, 4217, 2069, 1297, 1901, 3881, 7237, 11969, 18077, 25561, 34421, 44657, 56269, 69257, 83621 .

2.10.11 Brox polynomial, $P(n) = 43n^2 - 537n + 2971$. I find below polynomial by chance at by 3 skipping.

This is polynomial generating 17 prime numbers.
$P(n) = 688n^2 - 15052n + 83621$, generates 17 primes: 83621, 69257, 56269, 44657, 34421, 25561, 18077, 11969, 7237, 3881, 1901, 1297, 2069, 4217, 7741, 12641, 18917 .

2.10.12 Frame polynomial, $P(n) = 3n^2 + 3n + 23$, is non-prime numbers at n= 22, 23, 27, 30, 38. By 3 skipping, I calculate the polynomial including values at n = 25.

This is polynomial generating 16 prime numbers.
$P(n) = 48n^2 - 444n + 1049$, generates 16 primes: 1049, 653, 353, 149, 41, 29, 113, 293, 569, 941, 1409, 1973, 2633, 3389, 4241, 5189 .

2.10.13 Legendre polynomial, $P(n) = 2n^2 + 29$, is non-prime numbers at n= 29, 30, 32, 35, 39. By 6 skipping, I calculate the polynomial including values at n = 31.

This is polynomial generating 16 prime numbers.
$P(n) = 98n^2 - 700n + 1279$, generates 16 primes: 1279, 677, 271, 61, 47, 229, 607, 1181, 1951, 2917, 4079, 5437, 6991, 8741, 10687, 12829 .

2.10.14 Brox polynomial, $P(n) = 6n^2 - 342n + 4903$ (or $6n^2 + 6n + 31$), is non-prime numbers at n= 29, 30, 31, 34, 36, 41. By 6 skipping, I calculate the polynomial including values at n = 32.

This is polynomial generating 16 prime numbers.
$P(n) = 294n^2 - 1974n + 3343$, generates 16 primes: 3343, 1663, 571, 67, 151, 823, 2083, 3931, 6367, 9391, 13003, 17203, 21991, 27367, 33331, 39883 .

2.10.15 Brox polynomial, $P(n) = 6n^2 - 342n + 4903$ (or $6n^2 + 6n + 31$), is non-prime numbers at n= 29, 30, 31, 34, 36, 41. By 6 skipping, I calculate the polynomial including values at n = 35.

This is polynomial generating 16 prime numbers.
$P(n) = 294n^2 - 2310n + 4567$, generates 16 primes: 4567, 2551, 1123, 283, 31, 367, 1291, 2803, 4903, 7591, 10867, 14731, 19183, 24223, 29851, 36067 .

2.10.16 Fung and Ruby polynomial, $P(n) = | 36n^2 - 810n + 2753 |$, is non-prime numbers at n= 45, 53, 54, 58, 60. By 3 skipping, I calculate the polynomial including values at n = 44.

This is polynomial generating 16 prime numbers.
$P(n) = | 576n^2 - 4392n + 6569 |$, generates 16 primes: 6569, 2753, 89, |-1423|, |-1783|, |-991|, 953, 4049, 8297, 13697, 20249, 27953, 36809, 46817, 57977, 70289 .

2.10.17 Bruno polynomial, $P(n) = 3n^2 + 39n + 37$, is non-prime numbers at n= 18, 24, 27, 28, 37. By 2 skipping, I calculate the polynomial including values at n = 23.

This is polynomial generating 15 prime numbers.
$P(n) = 27n^2 + 153n + 127$, generates 15 primes: 127, 307, 541, 829, 1171, 1567, 2017, 2521, 3079, 3691, 4357, 5077, 5851, 6679, 7561 .

2.10.18 Fung and Ruby polynomial, $P(n) = | 36n^2 - 810n + 2753 |$, is non-prime numbers at n= 45, 53, 54, 58, 60. By 3 skipping, I calculate the polynomial including values at n = 43.

This is polynomial generating 15 prime numbers.

$P(n) = | 576n^2 - 2376n + 647 |$, generates 15 primes: 647, |-1153|, |-1801|, |-1297|, 359, 3167, 7127, 12239, 18503, 25919, 34487, 44207, 55079, 67103, 80279 .

2.10.19 Speiser polynomial, $P(n) = | 103n^2 - 4707n + 50383 |$, is non-prime numbers at n= 43, 46, 48, 55, 56. By 4 skipping, I calculate the polynomial including values at n = 44.

This is polynomial generating 15 prime numbers.
$P(n) = |2575n^2 - 19415n + 33203|$, generates 15 primes: 33203, 16363, 4673, |-1867|,

|−3257|, 503, 9413, 23473, 42683, 67043, 96553, 131213, 171023, 215983, 266093 .

2.10.20 Legendre polynomial, $P(n) = 2n^2 + 29$, is non-prime numbers at n= 29, 30, 32, 35, 39. By 5 skipping, I calculate the polynomial including values at n = 31.

This is polynomial generating 14 prime numbers.
$P(n) = 72n^2 - 552n + 1087$, generates 14 primes: 1087, 607, 271, 79, 31, 127, 367, 751, 1279, 1951, 2767, 3727, 4831, 6079 .

2.10.21 Frame polynomial, $P(n) = 3n^2 + 3n + 23$, is non-prime numbers at n= 22, 23, 27, 30, 38. By 4 skipping, I calculate the polynomial including values at n = 24.

This is polynomial generating 14 prime numbers.
$P(n) = 75n^2 - 765n + 1973$, generates 14 primes: 1973, 1283, 743, 353, 113, 23, 83, 293, 653, 1163, 1823, 2633, 3593, 4703 .

2.10.22 Legendre polynomial, $P(n) = 2n^2 + 29$, is non-prime numbers at n= 29, 30, 32, 35, 39, 44. By 6 skipping, I calculate the polynomial including values at n = 34.

This is polynomial generating 14 prime numbers.

$P(n) = 98n^2 - 616n + 997$, generates 14 primes: 997, 479, 157, 31, 101, 367, 829, 1487, 2341, 3391, 4637, 6079, 7717, 9551 .

2.10.23 Fung and Ruby polynomial, $P(n) = | 36n^2 - 810n + 2753 |$, is non-prime numbers at n= 45, 53, 54, 58, 60. By 4 skipping, I calculate the polynomial including values at n = 42.

This is polynomial generating 14 prime numbers.
$P(n) = | 900n^2 - 5130n + 5507 |$, generates 14 primes: 5507, 1277, |−1153|, |−1783|, |−613|, 2357, 7127, 13697, 22067, 32237, 44207, 57977, 73547, 90917 .

2.10.24 Frame polynomial, $P(n) = 3n^2 + 3n + 23$, is non-prime numbers at n= 22, 23, 27, 30, 38. By 4 skipping, I calculate the polynomial including values at n = 26.

This is polynomial generating 13 prime numbers.
$P(n) = 75n^2 - 555n + 1049$, generates 13 primes: 1049, 569, 239, 59, 29, 149, 419, 839, 1409,

2129, 2999, 4019, 5189 .

2.10.25 Brox polynomial, $P(n) = 43n^2 - 537n + 2971$, is non-prime numbers at n= 35, 41, 48, 52, 53, 54. By 3 skipping, I calculate the polynomial including values at n = 36.

This is polynomial generating 13 prime numbers.
$P(n) = 688n^2 - 3524n + 5807$, generates 13 primes: 5807, 2971, 1511, 1427, 2719, 5387, 9431, 14851, 21647, 29819, 39367, 50291, 62591 .

2.10.26 Legendre polynomial, $P(n) = 2n^2 + 29$, is non-prime numbers at n= 29, 30, 32, 35, 39. By 6 skipping, I calculate the polynomial including values at n = 33.

This is polynomial generating 12 prime numbers.
$P(n) = 98n^2 - 644n + 1087$, generates 12 primes: 1087, 541, 191, 37, 79, 317, 751, 1381, 2207, 3229, 4447, 5861 .

2.10.27 Brox polynomial, $P(n) = 6n^2 - 342n + 4903$ (or $6n^2 + 6n + 31$), is non-prime numbers at n= 29, 30, 31, 34, 36, 41. By 4 skipping, I calculate the polynomial including values at n = 32.

This is polynomial generating 12 prime numbers.
$P(n) = 150n^2 + 150n + 67$, generates 12 primes: 67, 367, 967, 1867, 3067, 4567, 6367, 8467, 10867, 13567, 16567, 19867 .

2.10.28 Brox polynomial, $P(n) = 6n^2 - 342n + 4903$ (or $6n^2 + 6n + 31$), is non-prime numbers at n= 29, 30, 31, 34, 36, 41. By 6 skipping, I calculate the polynomial including values at n = 33.

This is polynomial generating 12 prime numbers.
$P(n) = 294n^2 - 1890n + 3067$, generates 12 primes: 3067, 1471, 463, 43, 211, 967, 2311, 4243, 6763, 9871, 13567, 17851 .

2.10.29 S.M.Ruiz polynomial, $P(n) = | 3n^3 - 183n^2 + 3318n - 18757 |$, is non-prime numbers at n= 47, 50, 52, 54, 55, 58. By 5 skipping, I calculate the polynomial including values at n = 45.

This is polynomial generating 12 prime numbers.

$P(n) = | 648n^3 - 5616n^2 + 13806n - 10369 |$, generates 12 primes: |-10369|, |-1531|, |-37|, |-1999|, |-3529|, |-739|, 10259, 33353, 72431, 131381, 214091, 324449 .

2.10.30 Fung and Ruby polynomial, $P(n) = | 47n^2 - 170n + 10181 |$, is non-prime numbers at n= 43, 44, 45, 50, 54. By 3 skipping, I calculate the polynomial including values at n = 42.

This is polynomial generating 12 prime numbers.
$P(n) = | 752n^2 - 6052n + 6967 |$, generates 12 primes: 6967, 1667, |-2129|, |-4421|, |-5209|, |-4493|, |-2273|, 1451, 6679, 13411, 21647, 31387 .

2.10.31 Fung and Ruby polynomial, $P(n) = | 47n^2 - 170n + 10181 |$, is non-prime numbers at n= 43, 44, 45, 50, 54. By 4 skipping, I calculate the polynomial including values at n = 42.

This is polynomial generating 12 prime numbers.
$P(n) = | 1175n^2 - 7565n + 6967 |$, generates 12 primes: 6967, 577, |-3463|, |-5153|, |-4493|, |-1483|, 3877, 11587, 21647, 34057, 48817, 65927 .

2.10.32 Fung and Ruby polynomial, $P(n) = | 36n^2 - 810n + 2753 |$, is non-prime numbers at n= 45, 53, 54, 58, 60. By 5 skipping, I calculate the polynomial including values at n = 44.

This is polynomial generating 12 prime numbers.
$P(n) = | 1296n^2 - 6588n + 6569 |$, generates 12 primes: 6569, 1277, |-1423|, |-1531|, 953, 6029, 13697, 23957, 36809, 52253, 70289, 90917 .

2.10.33 Fung and Ruby polynomial, $P(n) = | 36n^2 - 810n + 2753 |$, is non-prime numbers at n= 45, 53, 54, 58, 60. By 5 skipping, I calculate the polynomial including values at n = 43.

This is polynomial generating 12 prime numbers.
$P(n) = | 1296n^2 - 7020n + 7703 |$, generates 12 primes: 7703, 1979, |-1153|, |-1693|, 359, 5003, 12239, 22067, 34487, 49499, 67103, 87299 .

2.10.34 Brox polynomial, $P(n) = 43n^2 - 537n + 2971$, is non-prime numbers at n= 35, 41, 48, 52, 53, 54. By 5 skipping, I calculate the polynomial including values at n = 39.

This is polynomial generating 12 prime numbers.

$P(n) = 1548n^2 - 7866n + 11287$, generates 12 primes: 11287, 4969, 1747, 1621, 4591, 10657, 19819, 32077, 47431, 65881, 87427, 112069 .

2.10.35 Brox polynomial, $P(n) = 43n^2 - 537n + 2971$, is non-prime numbers at n= 35, 41, 48, 52, 53, 54. By 6 skipping, I calculate the polynomial including values at n = 36.

This is polynomial generating 12 prime numbers.
$P(n) = 2107n^2 - 7371n + 7741$, generates 12 primes: 7741, 2477, 1427, 4591, 11969, 23561, 39367, 59387, 83621, 112069, 144731, 181607 .

2.10.36 Fung and Ruby polynomial, $P(n) = 36n^2 - 810n + 2753$, is non-prime numbers at n= 45, 53, 54, 58, 60. By 2 skipping, I calculate the polynomial including values at n = 44.

This is polynomial generating 11 prime numbers.
$P(n) = 324n^2 + 1890n + 953$, generates 11 primes: 953, 3167, 6029, 9539, 13697, 18503, 23957, 30059, 36809, 44207, 52253 .

2.10.37 Brox polynomial, $P(n) = 43n^2 - 537n + 2971$, is non-prime numbers at n= 35, 41, 48, 52, 53, 54. By 4 skipping, I calculate the polynomial including values at n = 37.

This is polynomial generating 11 prime numbers.
$P(n) = 1075n^2 - 3975n + 4969$, generates 11 primes: 4969, 2069, 1319, 2719, 6269, 11969, 19819, 29819, 41969, 56269, 72719 .

2.10.38 Brox polynomial, $P(n) = 43n^2 - 537n + 2971$, is non-prime numbers at n= 35, 41, 48, 52, 53, 54. By 4 skipping, I calculate the polynomial including values at n = 39.

This is polynomial generating 10 prime numbers.
$P(n) = 1075n^2 - 965n + 1511$, generates 10 primes: 1511, 1621, 3881, 8291, 14851, 23561, 34421, 47431, 62591, 79901 .

$P(n) = 1075n^2 - 965n + 1511$, generates 10 primes: 1511, 1621, 3881, 8291, 14851, 23561, 34421, 47431, 62591, 79901 .

2.10.39 Brox polynomial, $P(n) = 43n^2 - 537n + 2971$, is non-prime numbers at n= 35, 41, 48, 52, 53, 54. By 5 skipping, I calculate the polynomial including values at n = 37.

This is polynomial generating 10 prime numbers.

$P(n) = 1548n^2 - 2706n + 2477$, generates 10 primes: 2477, 1319, 3257, 8291, 16421, 27647, 41969, 59387, 79901, 103511 .

3 Consideration

It is expected that polynomials of many continuous prime numbers can be found by skipping successfully the values of polynomials containing many prime numbers.

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