Welcome Jacob Eric Simon (ORCID: 0000-0002-6572-3985)

Logout from ORCID

Toggle Nomenclature

EJS_P1P1P2P3P5_P2P3N1P0P1

Nbre (10-500): 30

Exponential formula
Hyperbolic formula
Trigonometric formula

DEBUG: False
CALCSYM: True
ADDCTES: False Hide log

Submit

Mode Admin: Universal Atlas of Geometric Constants GCEJS Derived from Linear Recurrences

---

EJS_P1P1P2P3P5_P2P3N1P0P1 has already been provided to the Universal Atlas of Geometric Linear Recurrences.
This sequence EJS_P1P1P2P3P5_P2P3N1P0P1 is in reality the sequence EJS_P1P1_P1P1.
You can use the homogeneous linear recurrence reduction rules to identify it. This can be easily verified by examining the values of the sequence.
The EJS_P1P1P2P3P5_P2P3N1P0P1 formula will be further reduced using the original formula of the recurrence EJS_P1P1_P1P1.

Mathematic EJS_P1P1P2P3P5_P2P3N1P0P1 sequence

```
LinearRecurrence[{1, 0, -1, 3, 2}, {1, 1, 2, 3, 5}, 30]
a(n) = (2)*a(n-5) + (3)*a(n-4) + (-1)*a(n-3) + (0)*a(n-2) + (1)*a(n-1)
Initial Terms: a(0) = 1, a(1) = 1, a(2) = 2, a(3) = 3, a(4) = 5
```

$$EJS\_P1P1P2P3P5\_P2P3N1P0P1(n) = a(n) = -\frac{3\cdot 2^n\sqrt{5}}{-9\sqrt{5}\left(-1+\sqrt{5}\right)^n+15\left(-1+\sqrt{5}\right)^n}+\frac{3\cdot 2^n}{-9\sqrt{5}\left(-1+\sqrt{5}\right)^n+15\left(-1+\sqrt{5}\right)^n}+\frac{3\left(\frac{1}{-\frac{\sqrt{5}}{2}-\frac{1}{2}}\right)^n}{15+9\sqrt{5}}+\frac{3\sqrt{5}\left(\frac{1}{-\frac{\sqrt{5}}{2}-\frac{1}{2}}\right)^n}{15+9\sqrt{5}}$$

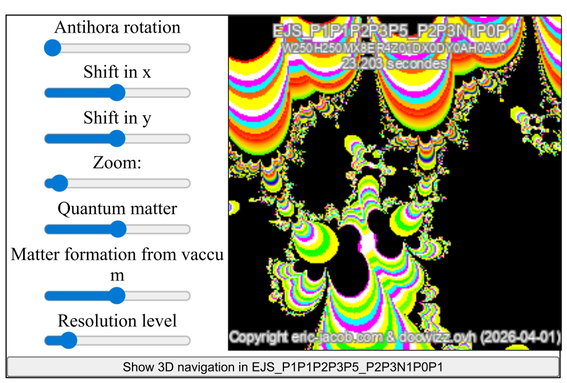
```
1,  1,  2,  3,  5,  8,  13,  21,  34,  55,  89,  144,  233,  377,  610,  987,  1597,  2584,  4181,  6765,  10946,  17711,  28657,  46368,  75025,  121393,  196418,  317811,  514229,  832040,  1346269

 a(0) = 1
 a(1) = 1
 a(2) = 2
 a(3) = 3
 a(4) = 5
 a(5) = 8
 a(6) = 13
 a(7) = 21
 a(8) = 34
 a(9) = 55
 a(10) = 89
 a(11) = 144
 a(12) = 233
 a(13) = 377
```

Sequence [1, 1, 2, 3, 5, 8, 13, 21, 34, 55, 89, 144, 233, 377, 610, 987, 1597, 2584, 4181, 6765, 10946, 17711, 28657, 46368, 75025, 121393, 196418, 317811, 514229, 832040, 1346269]:
OEIS

This sequence need an exact formula to provides significant data for the Universal Atlas of Geometric Constants GCEJS Derived from Linear Recurrences.

$$EJS\_P1P1P2P3P5\_P2P3N1P0P1_{GF}(x) = \frac{-2x^3-x^2-1}{2x^5+3x^4-x^3+x-1}$$

Navigation in a quantum univers 2D/3D of variants; more details on Wiki (EJS Fibovar Theory)



Time: 4.4179410934448 sec (Global exec time)