Euler 1700s
$\frac{2}{\pi-2} = \mathrm{PCF}(1, n(n+1))$
$\frac{2}{4-\pi} = \mathrm{PCF}(2, n^2)$
$\frac{2}{\pi} - \frac{1}{2} = \sum_{n=0}^{\infty} \frac{2^{-4n-4}\binom{2n}{n}\binom{2n+2}{n+1}}{(n+1)(2n+1)}$
$2\pi - 4 = \sum_{n=1}^{\infty} \frac{16^n}{n^2(2n+1)^2\binom{2n}{n}^2}$
-1.00
-0.91
Gauss 1813
$\frac{4}{\pi} = \mathrm{PCF}(2n+1, n^2)$
Euler 1700s
$\pi + 3 = \mathrm{PCF}(6, (2n-1)^2)$
-0.21
-1.00
Brouncker 1655
$\frac{4}{\pi} + 1 = \mathrm{PCF}(2, (2n-1)^2)$
-0.48
-0.45
(0, 0, 1)
(-1, 3, 3)
(1, 1, 2)
(1, 1, 1)
(2, 1, 1)
(3, 1, 1)
(1, 0, 0)
(0,1,2)
(0,0,2)
(0,0,0)
-0.65
Coboundary cluster
δ
CMF
Example from cluster
PCF
or
Σ
Distinct formula
Ramanujan Machine 2021
$\frac{2}{\pi} = \mathrm{PCF}(3n+1, -n(2n-1))$
Sun 2022
$\frac{3\pi}{2} + 2 = \sum_{n=1}^{\infty} \frac{4^n(12n-5)}{(2n-1)\binom{4n}{2n}}$