$\boldsymbol{\beta^2 = 1\beta + 1}$

$(\frac{1}{3})_\beta = 0.(00101000)^\omega$

$(\frac{1}{5})_\beta = 0.(00010010101001001000)^\omega$

$(\frac{1}{6})_\beta = 0.(00010000101010010101001000)^\omega$

$(\frac{1}{7})_\beta = 0.(0000101010100000)^\omega$

$(\frac{1}{9})_\beta = 0.(00001000101010101000100000)^\omega$

$(\frac{1}{10})_\beta = 0.(00001000010001010000101000101010100010010100000010010001000000)^\omega$

$(\frac{1}{13})_\beta = 0.(00000100101010101001001000000)^\omega$

$(\frac{1}{14})_\beta = 0.(00000100100010010010101010100100101000010010000)^\omega$

$(\frac{1}{17})_\beta = 0.(00000100000010101010100101010010000)^\omega$

$(\frac{1}{18})_\beta = 0.(00000010101010101000000)^\omega$

$(\frac{1}{23})_\beta = 0.(00000010010000100010101010101000010100101000000)^\omega$

$(\frac{1}{25})_\beta = 0.(00000010001000010001000101000100001010001000101010101010001000100101000100000100010010001000100010000000)^\omega$

$(\frac{1}{26})_\beta = 0.(00000010000100100100000001001001010001010101010100010010010010101001001001000010000000)^\omega$

$(\frac{1}{27})_\beta = 0.(00000010000010010100100010100010101010101000101000010000010100000010000000)^\omega$

$(\frac{1}{34})_\beta = 0.(00000001001010101010101010010010000000)^\omega$

$(\frac{1}{37})_\beta = 0.(00000001001000010101001010010010101010101010010010100100000010000010010000000)^\omega$

$(\frac{1}{41})_\beta = 0.(00000001000010101010101010010100100100000000)^\omega$

$(\frac{1}{43})_\beta = 0.(00000001000010000000100010101001000010101010101001010010101010001000000000101001000000)^\omega$

$(\frac{1}{46})_\beta = 0.(00000001000000000101010101010010101010010000000)^\omega$

$(\frac{1}{47})_\beta = 0.(00000000101010101010101000000000)^\omega$

$(\frac{1}{49})_\beta = 0.(0000000010101000100001000010010000101000100000001010101010101000000010001001010010010100100010001010100$

$(\frac{1}{53})_\beta = 0.(000000001010000101001010010010000101001010000010101010101010000010010000100001001010010000100010100000$

$(\frac{1}{54})_\beta = 0.(000000001010000010001010000010101010101010000010100010000010100000000)^\omega$

$(\frac{1}{61})_\beta = 0.(000000001001000000100010101010101010000101010010100000000)^\omega$

$(\frac{1}{67})_\beta = 0.(000000001000010100100010100100101000010010000010010100101000101010101010101000100100001010000001001000100$

$(\frac{1}{73})_\beta = 0.(000000001000000100010010100101010100000101010010000101000010101000101010101010101000101001010000100001000$

$(\frac{1}{82})_\beta = 0.(000000000101001001001001000101010000100100100101001010101010101010100100001001001001010000000100100100100$

$(\frac{1}{89})_\beta = 0.(000000000100101010101010101010010010000000000)^\omega$

$(\frac{1}{94})_\beta = 0.(000000000100100100100100000100100100100101010101010101010010010010010010010100100100100100

$$(\frac{1}{25})_\beta = 0.(0001020010111100111011020020202012000120011201112002000110 00)^\omega$$

$$(\frac{1}{26})_\beta = 0.(00010112002020201200110110 00)^\omega$$

$$(\frac{1}{27})_\beta = 0.(000101101011100011102011101012002020201200201001202001200001201001011000)^\omega$$

$$(\frac{1}{29})_\beta = 0.(0001002020201201 1000)^\omega$$

$$(\frac{1}{33})_\beta = 0.(0001000020202012020110 00)^\omega$$

$$(\frac{1}{34})_\beta = 0.(0000202020200000)^\omega$$

$$(\frac{1}{38})_\beta = 0.(0000200201012000202020200011010010200000)^\omega$$

$$(\frac{1}{50})_\beta = 0.(0000111012000112000110111020202020012001020011020020012000 00)^\omega$$

$$(\frac{1}{54})_\beta = 0.(0000110110012010200010012012001020202020020020111010002010111001012000 00)^\omega$$

$$(\frac{1}{57})_\beta = 0.(0000110002000010202020200202000201200000)^\omega$$

$$(\frac{1}{58})_\beta = 0.(0000102020202010 0000)^\omega$$

$$(\frac{1}{59})_\beta = 0.(0000102011100010202020201000012020100000)^\omega$$

$$(\frac{1}{66})_\beta = 0.(0000101020202020101000 00)^\omega$$

$$(\frac{1}{73})_\beta = 0.(0000100111200112020111200111201020202020101111101111000011101111101000 00)^\omega$$

$$(\frac{1}{99})_\beta = 0.(0000012020202020111000 00)^\omega$$

$\beta^2 = 3\beta + 1$

$$(\frac{1}{5})_\beta = 0.(020130220110)^\omega$$

$$(\frac{1}{7})_\beta = 0.(0112213022211210)^\omega$$

$$(\frac{1}{10})_\beta = 0.(010030230210)^\omega$$

$$(\frac{1}{11})_\beta = 0.(00303000)^\omega$$

$$(\frac{1}{13})_\beta = 0.(00221220210202001012221030300121200301010230111130 00)^\omega$$

$$(\frac{1}{14})_\beta = 0.(00212301130002220211103030021101210300120022300 0)^\omega$$

$$(\frac{1}{17})_\beta = 0.(0020103030102000)^\omega$$

$$(\frac{1}{19})_\beta = 0.(00123012221220022030301110111121202120 00)^\omega$$

$$(\frac{1}{22})_\beta = 0.(0012010120303012020120 00)^\omega$$

$$(\frac{1}{25})_\beta = 0.(00111120221023021022101121203030122220013001003001301212 2000)^\omega$$

$$(\frac{1}{29})_\beta = 0.(00102201102030302002013010 00)^\omega$$

$$(\frac{1}{31})_\beta = 0.(00101212130121020012022222202030302011212101130102220011112010 00)^\omega$$

$$(\frac{1}{34})_\beta = 0.(00100201200130120130203030202201202210120110100 0)^\omega$$

$$(\frac{1}{41})_\beta = 0.(00022302123030302111002110 00)^\omega$$

$$(\frac{1}{50})_\beta = 0.(00021022122213022212221022303030213001211121001121113001100 0)^\omega$$

$$(\frac{1}{59})_\beta = 0.(00020001303030220301100 0)^\omega$$

$\beta^2 = 4\beta + 1$

$$(\frac{1}{3})_\beta = 0.(11302320)^\omega$$

$$(\frac{1}{5})_\beta = 0.(03220123403123022110)^\omega$$

$$(\frac{1}{6})_\beta = 0.(02403210)^\omega$$

$$(\frac{1}{7})_\beta = 0.(0221224032232210)^\omega$$

$$(\frac{1}{9})_\beta = 0.(01403310)^\omega$$

$$(\frac{1}{10})_\beta = 0.(013121114033132333 10)^\omega$$

$$(\frac{1}{13})_\beta = 0.(011222012231403332230222131 0)^\omega$$

$$(\frac{1}{14})_\beta = 0.(0110314033400310)^\omega$$

$$(\frac{1}{17})_\beta = 0.(010040340310)^\omega$$

$$(\frac{1}{18})_\beta = 0.(00404000)^\omega$$

$$(\frac{1}{23})_\beta = 0.(0031104040034000)^\omega$$

$$(\frac{1}{26})_\beta = 0.(00233323132040401111213130 00)^\omega$$

$$(\frac{1}{27})_\beta = 0.(00231333204040113111 3000)^\omega$$

$$(\frac{1}{34})_\beta = 0.(002040402000)^\omega$$

$$(\frac{1}{41})_\beta = 0.(00132222133222233040402122223112222120 00)^\omega$$

$$(\frac{1}{46})_\beta = 0.(0012304040222000)^\omega$$

$$(\frac{1}{47})_\beta = 0.(00122221222230404022222322222000)^\omega$$

$$(\frac{1}{53})_\beta = 0.(00113212013211304040231233021233 2000)^\omega$$

$$(\frac{1}{54})_\beta = 0.(00113011304040232023 2000)^\omega$$

$$(\frac{1}{61})_\beta = 0.(00110030404024032000)^\omega$$

$$(\frac{1}{82})_\beta = 0.(00033333321313134040403111111231313110 00)^\omega$$

$$(\frac{1}{89})_\beta = 0.(00032222220122222340404031222223022222211000)^\omega$$

$$(\frac{1}{94})_\beta = 0.(00031312333340404031313211111000)^\omega$$

$\beta^2 = 5\beta + 1$

$$(\frac{1}{3})_\beta = 0.(13403220)^\omega$$

$$(\frac{1}{6})_\beta = 0.(042244123450413311432110)^\omega$$

$$(\frac{1}{9})_\beta = 0.(02504310)^\omega$$

$$(\frac{1}{11})_\beta = 0.(022140113250433420342310)^\omega$$

$$(\frac{1}{13})_\beta = 0.(020150440310)^\omega$$

$$(\frac{1}{17})_\beta = 0.(013010420110402150443040040350102410)^\omega$$

$$(\frac{1}{18})_\beta = 0.(012301023150443304022410)^\omega$$

$$(\frac{1}{19})_\beta = 0.(012043432333131031504440021232224250 1410)^\omega$$

$$(\frac{1}{22})_\beta = 0.(011043104150445002500410)^\omega$$

$$(\frac{1}{26})_\beta = 0.(010050450410)^\omega$$

$$(\frac{1}{27})_\beta = 0.(00505000)^\omega$$

$$(\frac{1}{33})_\beta = 0.(004111411050500444145000)^\omega$$

$$(\frac{1}{34})_\beta = 0.(004030440310201050501020020150304000)^\omega$$

$$(\frac{1}{41})_\beta = 0.(003204040120505014010103 4000)^\omega$$

$$(\frac{1}{54})_\beta = 0.(002302023050502303023000)^\omega$$

$$(\frac{1}{57})_\beta = 0.(002214345004244230505023412110413113 3000)^\omega$$

$$(\frac{1}{66})_\beta = 0.(002031203050503014402000)^\omega$$

$$(\frac{1}{81})_\beta = 0.(001340134050503220322000)^\omega$$

$$(\frac{1}{99})_\beta = 0.(001204014050503401032000)^\omega$$

$\boldsymbol{\beta^2 = 6\beta + 1}$

$$(\frac{1}{5})_\beta = 0.(11240341504543022520)^\omega$$

$$(\frac{1}{7})_\beta = 0.(0523456051432110)^\omega$$

$$(\frac{1}{10})_\beta = 0.(03453523605321314310)^\omega$$

$$(\frac{1}{11})_\beta = 0.(032451144360534215522310)^\omega$$

$$(\frac{1}{14})_\beta = 0.(0242226054244410)^\omega$$

$$(\frac{1}{17})_\beta = 0.(021242250442225260545424420124441410)^\omega$$

$$(\frac{1}{19})_\beta = 0.(01605510)^\omega$$

$$(\frac{1}{22})_\beta = 0.(01425412216055241254451 0)^\omega$$

$$(\frac{1}{34})_\beta = 0.(0104241535544500605601425131122205 10)^\omega$$

$$(\frac{1}{37})_\beta = 0.(010060560510)^\omega$$

$$(\frac{1}{38})_\beta = 0.(00606000)^\omega$$

$$(\frac{1}{74})_\beta = 0.(003060603000)^\omega$$

$\boldsymbol{\beta^2 = 7\beta + 1}$

$$(\frac{1}{3})_\beta = 0.(22504530)^\omega$$

$$(\frac{1}{5})_\beta = 0.(130260550420)^\omega$$

$$(\frac{1}{6})_\beta = 0.(112363135160565414642620)^\omega$$

$$(\frac{1}{9})_\beta = 0.(054521553570623256224210)^\omega$$

$$(\frac{1}{10})_\beta = 0.(050470630210)^\omega$$

$$(\frac{1}{17})_\beta = 0.(02706510)^\omega$$

$$(\frac{1}{18})_\beta = 0.(025651262270652126515510)^\omega$$

$$(\frac{1}{23})_\beta = 0.(0213627065641510)^\omega$$

$$(\frac{1}{25})_\beta = 0.(020170660510)^\omega$$

$$(\frac{1}{29})_\beta = 0.(0152650412217066251302655610)^\omega$$

$$(\frac{1}{34})_\beta = 0.(013402034170664405033610)^\omega$$

$$(\frac{1}{50})_\beta = 0.(010070670610)^\omega$$

$$(\frac{1}{51})_\beta = 0.(00707000)^\omega$$

$\boldsymbol{\beta^2 = 8\beta + 1}$

$$(\frac{1}{3})_\beta = 0.(25605330)^\omega$$

$$(\frac{1}{5})_\beta = 0.(150470640320)^\omega$$

$$(\frac{1}{6})_\beta = 0.(12706620)^\omega$$

$$(\frac{1}{7})_\beta = 0.(1123617067652720)^\omega$$

$$(\frac{1}{9})_\beta = 0.(072551356780716337532110)^\omega$$

$$(\frac{1}{10})_\beta = 0.(064680724210)^\omega$$

$$(\frac{1}{11})_\beta = 0.(05807310)^\omega$$

$$(\frac{1}{13})_\beta = 0.(050480740310)^\omega$$

$$(\frac{1}{14})_\beta = 0.(0456348074325410)^\omega$$

$$(\frac{1}{18})_\beta = 0.(035324633380753564255510)^\omega$$

$$(\frac{1}{22})_\beta = 0.(02807610)^\omega$$

$$(\frac{1}{26})_\beta = 0.(024280764610)^\omega$$

$$(\frac{1}{33})_\beta = 0.(01807710)^\omega$$

$$(\frac{1}{65})_\beta = 0.(010080780710)^\omega$$

$$(\frac{1}{66})_\beta = 0.(00808000)^\omega$$

$$(\frac{1}{99})_\beta = 0.(005327633080802561256000)^\omega$$

$\boldsymbol{\beta^2 = 9\beta + 1}$

$$(\frac{1}{5})_\beta = 0.(17440357807256054220)^\omega$$

$$(\frac{1}{11})_\beta = 0.(074866385790825133614210)^\omega$$

$$(\frac{1}{13})_\beta = 0.(0634460554669083655403453310)^\omega$$

$$(\frac{1}{22})_\beta = 0.(037027702390863062306610)^\omega$$

$$(\frac{1}{41})_\beta = 0.(020190880710)^\omega$$

$$(\frac{1}{71})_\beta = 0.(0114819088851810)^\omega$$

$$(\frac{1}{82})_\beta = 0.(010090890810)^\omega$$

$$(\frac{1}{83})_\beta = 0.(00909000)^\omega$$

$$(\frac{1}{97})_\beta = 0.(0077209090128000)^\omega$$