Unit 15, part 59.2
Aphorisms, advices, anecdotes, brain teasers, curious stories, epigrams, epigraphs, epitaphs, crazy-creative ideas, suggestions and set pieces for thriller and mystery writers, koans, memorabilia, mottos, poems, proverbs, riddles, quotations, sayings, slogans, scurrilities, besun, etc.
collected for encouragement and the advantage of my students and of myself.

Wort-Fundstücke, Gehörtes, Gelesenes, Zugelaufenes, Angeschwemmtes, …

Das Unerwartete, ja Unerwartbare erwarten.

Primes
Konstruieren Sie einen numerischen Algorithmus, der eine infinite Folge positiver reeller Zahlen

$\langle x(t) \rangle_{t=0}^{\infty}$; $x(t) \in \mathbb{R}_+$

mit

int(x(t)) = p_t ; p_1=2, p_2=3, p_3=5, p_4=7, ... primes erzeugt.

Nachtrag „Euler“
zu **Unit 15, part 58**
Linear convergence acceleration
Step 1, equ. (4)
und
zu **Unit 15, part 59.1**
Nocturne fantastique
Frage: Was geschieht mit 15, 58, Gl. (4) für dy=1 ?
Hierzu ein Beispiel:
Die Konvergenzdynamik der „Euler Formel“

$$x(n) = \prod_{i=1}^{n} \frac{1}{1 - \frac{1}{p_i^2}} \quad ; p_1 = 2,\ p_2 = 3,\ p_3 = 5,\ \text{... prime sequence}$$

$$\lim_{n \to \infty} x(n) = \frac{\pi^2}{6}$$

Die Berechnung ergibt für
x(t), t=1(1)200, genau=10
nachstehende Wertetabelle

1.333333333, 1.500000000, 1.562500000, 1.595052083, 1.608344184,
1.617917661, 1.623535431, 1.628045252, 1.631128671, 1.633070490,

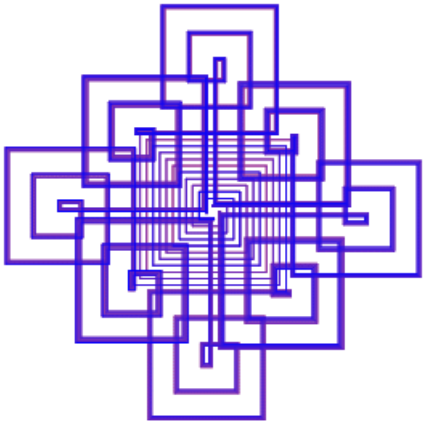
1.634771606, 1.635966614, 1.636940404, 1.637826194, 1.638567963,
1.639151499, 1.639622519, 1.640063278, 1.640428711, 1.640754193,
1.641062142, 1.641325133, 1.641563421, 1.641770689, 1.641945197, 1.642106172,
1.642260970, 1.642404424, 1.642542674, 1.642671319, 1.642773171, 1.642868904,
1.642956440, 1.643041479, 1.643115490, 1.643187556, 1.643254222, 1.643316073,
1.643374999, 1.643429910, 1.643481203, 1.643531370, 1.643576423, 1.643620548,
1.643662901, 1.643704408, 1.643741328, 1.643774383, 1.643806283, 1.643837630,
1.643867910, 1.643896689, 1.643924993, 1.643951087, 1.643975977, 1.643999745,
1.644022465, 1.644044851, 1.644066278, 1.644087099, 1.644107628, 1.644126779,
1.644144224, 1.644161223, 1.644178005, 1.644194367, 1.644209375, 1.644223852,
1.644237508, 1.644251007, 1.644264203, 1.644276961, 1.644289169, 1.644300987,
1.644312435, 1.644323644, 1.644334511, 1.644344944, 1.644355170, 1.644365000,
1.644374366, 1.644383644, 1.644392496, 1.644401267, 1.644409799, 1.644418179,
1.644426336, 1.644434209, 1.644441947, 1.644449618, 1.644457159, 1.644464326,
1.644471260, 1.644478081, 1.644484685, 1.644491185, 1.644497532, 1.644503591,
1.644509603, 1.644515222, 1.644520718, 1.644526019, 1.644531207, 1.644536286,
1.644541330, 1.644546270, 1.644551043, 1.644555719, 1.644560303, 1.644564856,
1.644569319, 1.644573696, 1.644578016, 1.644582308, 1.644586439, 1.644590441,
1.644594419, 1.644598348, 1.644602205, 1.644605992, 1.644609756, 1.644613387,
1.644616975, 1.644620501, 1.644623945, 1.644627292, 1.644630563, 1.644633745,
1.644636856, 1.644639917, 1.644642929, 1.644645908, 1.644648824, 1.644651694,
1.644654534, 1.644657315, 1.644660068, 1.644662723, 1.644665312, 1.644667825,
1.644670326, 1.644672766, 1.644675194, 1.644677599, 1.644679992, 1.644682328,
1.644684589, 1.644686828, 1.644689057, 1.644691265, 1.644693404, 1.644695523,
1.644697632, 1.644699723, 1.644701722, 1.644703704, 1.644705651, 1.644707557,
1.644709430, 1.644711287, 1.644713121, 1.644714932, 1.644716691, 1.644718436,
1.644720159, 1.644721861, 1.644723536, 1.644725190, 1.644726806, 1.644728409,
1.644729993, 1.644731570, 1.644733118, 1.644734659, 1.644736182, 1.644737677,
1.644739166, 1.644740627, 1.644742083, 1.644743522, 1.644744914, 1.644746296,
1.644747673, 1.644749039, 1.644750391, 1.644751729, 1.644753047, 1.644754351,
1.644755641, 1.644756883, 1.644758120, 1.644759336, 1.644760536, 1.644761715,

1.644762882, 1.644764038, 1.644765178, 1.644766296, 1.644767407, 1.644768506,…

Zum Vergleich Pi^2/6 = 1.644934067…

Man erkennt: die Konvergenz ist sehr schlecht. Die Berechnung liefert dx=1, eine Konvergenzbeschleunigung mit „**Unit 15, part 58, Linear convergence acceleration Step 1**, equ. (4)“ ist daher **nicht möglich**. Was kann man in diesem Falle tun?

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e.t.i.c.