

The Remarkableness of The Triple of Numbers (Pi, 4, 10)

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Abstract: this paper presents a collection of facts relating the triple of numbers (Pi, 4, 10) to our human reality, the system of Sun-Earth-Moon, with an accuracy of 99.2% and higher.

While this collection of 99+% accurate facts does not provide any definitive conclusions, persons interested in the philosophy of life may make their own conclusions... Suggested perception angle for precision: engineering of complex mechanical systems.

- The difference between the circumference of a circle with diameter 1 and the perimeter of a square with side 1, or circle's discrete orthogonal outline= $4-\pi$
- Area of a square/area of a circle inscribed in it= $4/\pi$
- $(4*\pi-4)/\pi=4-4/\pi\approx 2.73$
- $(4-\pi)/\pi=4/\pi-1\approx 0.2732$
- Average duration of pregnancy ≈ 273 days (average of 38- and 40-week conventions)
- Moon period ≈ 27.32 days
- Sun's rotational period ≈ 27.3 days (at 30 degrees latitude)
- Freezing point of water ≈ 273.2 degrees K
- Inverse of fine-structure constant $\approx 4*4*(4*\pi-4)\approx 137.06$, $4*\pi*\pi*\pi+\pi*\pi+\pi\approx 137.036$
- Cosmic microwave background temperature $\approx 4-4/\pi\approx 2.727$ K
- Boiling point of water ≈ 100 degrees C ($\approx 273.2+10*10$ K)
- Point of water's density anomaly ≈ 4 degrees C ($\approx 273.2+4$ K)
- Period of prvhash-1 (with PH_HASH_COUNT= $4*4$)= 273 bits
- Earth diameter $\approx 4/\pi*10^4\approx 12732$ km, or $\approx (4-\pi)/(\pi*\pi-\pi)*10^5\approx 12758$ km
- Sun mass/Earth mass $\approx (\pi*\pi+4)/(4*\pi*\pi+\pi-1)*10^6\approx 333244$
- Moon mass $\approx (4*\pi-4)*(4-\pi)*10^{22}\approx 7.35*10^{22}$ kg
- $\pi/(4-\pi)\approx 1/0.2732\approx 3.66$
- Normal human body temperature ≈ 36.6 degrees C ($\approx 273.2+36.6$ K)
- Earth diameter/Moon diameter ≈ 3.66 , same with circumference
- Earth orbital period ≈ 366 days (such *duration* is 99.8% accurate)
- 366 revolutions of the Moon around the Earth $\approx 10^4$ days
- Sun diameter/Moon diameter ≈ 400 , same with circumference
- Circumference of the Moon/Moon period ≈ 400 km/day
- Circumference of the Earth $\approx 4*10^4$ km
- Sun-Earth distance/Earth-Moon distance ≈ 400 (but highly-variable due to elliptical orbit)
- Harmonic numbers of 27.32: 54.64, 81.96, 109.28, 136.6
- Earth mass/Moon mass $\approx 81.96(=81.343)$
- Sun diameter/Earth diameter ≈ 109.28 , same with circumference
- Circumference of the Moon ≈ 10928 km
- Earth radius/Earth's barycenter distance ≈ 1.366
- Earth's axial precession period $\approx (\pi+4)/(\pi*\pi*\pi-4/\pi)/(\pi-1)*10^7$ days (average of NASA, Tycho's, and Copernican models)
- $1=\pi/\pi=4/4=10/10$
- $(4*\pi-4)/(4-\pi)\approx 10.0$
- $\pi*\pi+4/(\pi*\pi)-4\approx 2.00*\pi$
- $(4*\pi*\pi+\pi-1)/(\pi*\pi+4)\approx 3.00$
- (Historic meter standard $\approx g/(\pi*\pi)\approx 1$ m, currently in use with adjustment $\approx (\pi*\pi)/9.81$)
- (K is a thermodynamic temperature defined by physical laws)
- (4 and 1/4 are precise binary operations - "shift-left" and "shift-right" by 2 binary digits)
- (dithered rounding is a rounding after randomly adding or subtracting half the significant digit)