# Numbers by the running meter

Decimal expansion of $\pi$ (as much as can be printed along the side of a 2−meter folding ruler)


A product from MeterMorphosen (DE)

English translation and comments
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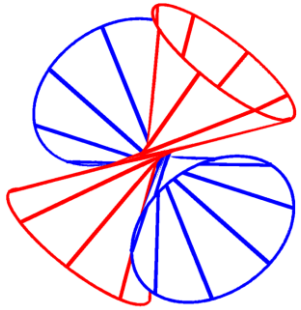

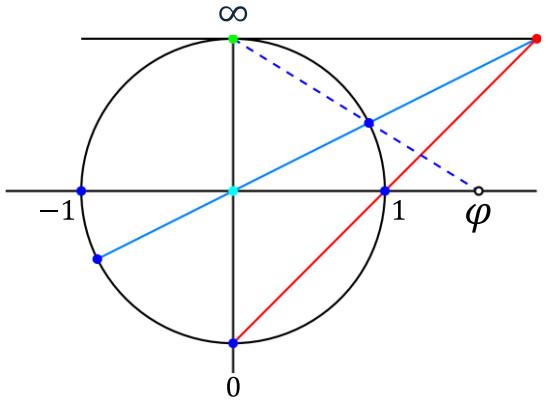

**2** is the only even prime number

$\pi = 3.14\ldots$

Roman numbers:
I (1), II(2),III(3), IV(4), V(5),VI(6),VII(7),VIII(8),IX(9), X(10)
L(5), C(100), D(500),M(1000)
MMXV = 2025

The Dirty Dozen (1967 war film)
**13** = Baker's Dozen
(medieval English practice)

One of a kind; unique item
Monolith, prototype, one person,
One-dimensional (1-D)

DIN A4 page is sized 21 x 29.7 cm

$\frac{29.7}{21} = \sqrt{2}$


$\varphi = 1.68\ldots$

$\sqrt{2} = 1.41\ldots$

Triangular numbers
Examples: 6 = 1+ 2+3
10 = 1+ 2+3 +4
15 = 1+ 2+3+4+5
21= 1+ 2+ 3+4+5 +6

Number of days in a week

Dozen

12.5 cm = 1/8 meter

1+2+3+4+5=**15**

$\begin{bmatrix} 8 & 1 & 6 \\ 3 & 5 & 7 \\ 4 & 9 & 2 \end{bmatrix}$

$2^4$=2x2x2x2=16

Magic square
Same sum of numbers in every row, column, diagonal. In this magic 3 x 3 Square: **15**

Twin Prime

**Twin Prime Conjecture:**
there are infinitely many twin primes

Prime numbers are printed in Red, e.g. 2, 3, 5, 7, 11,...

Twin primes:
$p$ prime and $p$+2 is also prime

Numbers that are members of the (standard) Fibonacci series are marked with an "F", e.g.1F, 3F, 5F, 8F,...

Cubic number: $n^3$
27= $3^3$ is the first odd cubic number
(note 8= $2^3$ is even).

Binary, Dual, Bits, Bytes

**36**=1+2+3+4+5+6+7+8

Two persons, two-dimensional (2-D)
Image and mirror image,
two connected objects


**21**=1+2+3+4+5+6

Decimal number,
binary representation and
binary expansion
$1 = 1 = 2^0$
$2 = 10 = 1 \times 2^1 + 0 \times 2^0$
$5 = 101 = 1 \times 2^2 + 0 \times 2^1 + 1 \times 2^0$
$10 = 1010 = 1 \times 2^3 + 0 \times 2^2 + 1 \times 2^1 + 0 \times 2^0$

24 hours in a day

25 cm = 2/8=1/4 meter

26 letters in the English alphabet

A perfect number is a positive integer that is equal to the sum of its proper divisors
Example
**28**=1+2+4+7+14

**28** is also a triangular number
**28**=1+2+3+4+5+6+7

30 is the smallest number with three different prime factors.
30 = 2 x 3 x 5

**33** = 1! + 2! + 3! + 4!
**33** = 1 + 2 + 6 + 24

$\begin{bmatrix} 16 & 2 & 3 & 13 \\ 5 & 11 & 10 & 8 \\ 9 & 7 & 6 & 12 \\ 4 & 14 & 15 & 1 \end{bmatrix}$

Example of 4x 4 magic square using all numbers 1 to 16) and summing up to the magic constant 34.

3×**37**=111 is a "special" because it shows up in a neat number pattern. It is a repunit (a number made of only 1's).
Even more interesting:
**37**×3=111
**37**×6=222
**37**×9=333
...
**37**×27=999