Numerology

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What is Numerology?

Numerology: The study of the supposed mystical significance of numbers and their effects on human life.

Numerology: Silly number-based pseudoscience espoused by quacks and charlatans.
Louis Farrakhan, October 1995:

“There, in the middle of this mall is the Washington Monument, 555 feet high. But if we put a one in front of that 555 feet, we get 1555*, the year that our first fathers landed on the shores of Jamestown, Virginia as slaves.

“In the background is the Jefferson and Lincoln Memorial, each one of these monuments** is 19 feet high.

“Abraham Lincoln, the sixteenth president. Thomas Jefferson, the third president, and 16 and three make 19 again. What is so deep about this number 19? Why are we standing on the Capitol steps today? That number 19—when you have a nine you have a womb that is pregnant. And when you have a one standing by the nine, it means that there’s something secret that has to be unfolded.”

* Actually 1619
** He means the statues in the monuments
Some Characteristics of Numerology

• disregarding or mixing of units (e.g., years with feet)
• dependence on base-10 representation
• focus on shape of number when written
• insignificant coincidences elevated (“law of small numbers”)
• assignment of meanings to specific numbers (“13 is unlucky”)
• use of invented units (e.g., “pyramid inch”)
• tweaking results to get the desired result
• unfalsifiability
The Koran and the Number 19

- it has $6 \times 19$ *suras* (chapters)
- it has $334 \times 19 = 6346$ verses and the digits of 6346 add up to 19
- it has $17324 \times 19$ letters
- the *Basmala* invocation has 19 letters in Arabic
- its first word, *Bism*, appears 19 times
- and so on

Rashad Khalifa
Who is to Blame?

The Pythagoreans: (c. 6th century B.C. E.)

“Bless us, divine number, who generatest gods and men! O holy tetraktys, that contains the root and source of the eternally flowing creation. For the divine number begins with the profound, pure unity until it comes to the holy four; then it begets the mother of all, the all-comprising, all-bounding, the first-born, the never-swerving, the never-tiring holy ten, the keyholder of all.” (about the number 4)
The Pythagoreans

<table>
<thead>
<tr>
<th>Male Numbers</th>
<th>Virile numbers (primes)</th>
<th>Effeminate number (composite)</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female Numbers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Marriage**

**Fig 17. Numbers Had Sex**
666: The Number of the Beast

"Here is wisdom. Let him that hath understanding count the number of the beast: for it is the number of a man; and his number is Six hundred threescore and six." (Revelation 13:18).

Code: A = 100, B = 101, C = 102, etc.

H I T L E R

107 + 108 + 119 + 111 + 104 + 117 = 666
666: The “Number of the Beast”

Ascii Code: A = 97, B = 98, C = 99, etc.

ROMNEY = 666

Code: A = 106, B = 107, C = 108, etc.

BARACK = 666
666: The “Number of the Beast”

Code: $A = 1, B = 2, C = 3,$ etc.

Barack Hussein Obama II = 181 + 435 + 50 = 666

Willard Mitt Romney = 231 + 435 = 666

“The Hausdorff dimension [of the Menger sponge] is given by $D_{M^S} = \ln 20/\ln 3 = 2.7268$. Note that the COBE temperature of microwave background ratio is found to be $T_c(COBE) = D_{M^S} K = 2.726 K$.”
Arthur Eddington, 1938: thought the fine-structure constant was exactly $1/136$, and the number of protons in the universe was exactly $136 \cdot 2^{256}$.

Arthur Eddington, 1946: thought the fine-structure constant was exactly $1/137$.

Today’s best estimate: $\alpha = 1/137.035999084(51)$.
Numerology in Astronomy:
Bode’s Law

<table>
<thead>
<tr>
<th>Planet</th>
<th>k</th>
<th>T-B rule distance (AU)</th>
<th>Real distance (AU)</th>
<th>% error (using real distance as the accepted value)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mercury</td>
<td>0</td>
<td>0.4</td>
<td>0.39</td>
<td>2.56%</td>
</tr>
<tr>
<td>Venus</td>
<td>1</td>
<td>0.7</td>
<td>0.72</td>
<td>2.78%</td>
</tr>
<tr>
<td>Earth</td>
<td>2</td>
<td>1.0</td>
<td>1.00</td>
<td>0.00%</td>
</tr>
<tr>
<td>Mars</td>
<td>4</td>
<td>1.6</td>
<td>1.52</td>
<td>5.26%</td>
</tr>
<tr>
<td>Ceres¹</td>
<td>8</td>
<td>2.8</td>
<td>2.77</td>
<td>1.08%</td>
</tr>
<tr>
<td>Jupiter</td>
<td>16</td>
<td>5.2</td>
<td>5.20</td>
<td>0.00%</td>
</tr>
<tr>
<td>Saturn</td>
<td>32</td>
<td>10.0</td>
<td>9.54</td>
<td>4.82%</td>
</tr>
<tr>
<td>Uranus</td>
<td>64</td>
<td>19.6</td>
<td>19.2</td>
<td>2.08%</td>
</tr>
<tr>
<td>Neptune</td>
<td>128</td>
<td>38.8</td>
<td>30.06</td>
<td>29.08%</td>
</tr>
<tr>
<td>Pluto¹</td>
<td>256</td>
<td>77.2²</td>
<td>39.44</td>
<td>95.75%</td>
</tr>
</tbody>
</table>

Table from Wikipedia
The “Face” on Mars

Low-Res (Viking, 1976)

High-Res (Mars Recon. Orbiter, 2006)
Hoagland’s Face Numerology

\[
\tan F = 1.174996... \\
\pi/e = 1.155727...
\]
Claimed to find names of famous Rabbis hidden in the Hebrew Bible to an extent that could not be explained by chance.
Bible Codes Debunked

- Brendan McKay, Dror Bar-Natan, Maya Bar-Hillel, and Gil Kalai
- showed the Witztum-Rips-Rosenberg results could be explained by “wiggle room” in deciding which variant of the rabbis’ names were used
Numerology in Mathematics

e^{\pi\sqrt{163}} \text{ an integer? Not really, but close: } 262537412640768743.9999999999999250072597198...

There’s a deep reason behind this, which has to do with the “class number” of $\mathbb{Q}(\sqrt{-163})$.

e^{\pi} - \pi = 20 ? \text{ Not really, but } 19.999099979...

This one seems to be a coincidence.
The “Law of Small Numbers”

Richard Guy: “There aren’t enough small numbers to meet the many demands made of them.”

or

“Superficial similarities spawn spurious statements.”
Example: Law of Small Numbers

Is $8 \cdot 13^i + 183$ ever a prime?

Not for $i = 1, 2, \ldots, 32019$
Numerology in Literature

Alistair Fowler, in *Triumphal Forms*, concocted a numerological argument involving Shakespeare’s sonnets.

He wrote 154 sonnets of which numbers 99, 126, and 145 are irregular. Why those?
Eschatology

Basil Stewart, writing in *The Great Pyramid*, predicted the end of the world for

- May 29-30 1928
- September 15 1936
- August 20 1953
Camping patiently explained how he reached his conclusion for May 21, 2011.
"Christ hung on the cross April 1, 33 A.D.," he began. "Now go to April 1 of 2011 A.D., and that's 1,978 years."
Camping then multiplied 1,978 by 365.2422 days - the number of days in each solar year...
Next, Camping noted that April 1 to May 21 encompasses 51 days.
Add 51 to the sum of previous multiplication total, and it equals 722,500.*
Camping realized that \((5 \times 10 \times 17) \times (5 \times 10 \times 17) = 722,500\).
Or put into words: (Atonement x Completeness x Heaven), squared.
"Five times 10 times 17 is telling you a story," Camping said. "It's the story from the time Christ made payment for your sins until you're completely saved.
"I tell ya, I just about fell off my chair when I realized that," Camping said.

*Actually: 722,500.0716
"[N]o one actually knows, even, what is wrong with numerology. Philosophers, of course, use numerology as a stock example of thought gone hopelessly wrong, and they are right to do so; still, they cannot tell you what it is that is wrong with it. If you ask a philosopher this, the best he will be able to come up with is a bit of Positivism about unverifiability, or a bit of Popperism about unfalsifiability: answers which the philosopher himself will know to be unsatisfactory on various grounds, but which have in addition this defect, that they put numerology in the same boat as, for example, astrology. But numerology is actually quite as different from astrology as astrology is from astronomy." -- David Stove, "What Is Wrong With Our Thoughts?", chapter 7 of *The Plato Cult and Other Philosophical Follies* (Blackwell, 1991).
Numerology in the Library

Dewey Decimal System Code for Algebra: 512
512 = 2$^9$

Dewey Decimal System Code for Numerology:
133.335

133 + 533 = 666
Numbers Are Like Gods

• Lots of people have a favourite one
• But no evidence they have any independent existence outside our minds
• And no evidence they have the power to influence our lives
• There are probably no numbers - so stop worrying and enjoy your life!
For Further Reading

