I Advocate for a Base-12 Counting System

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I advocate for a base-12 counting system as an alternative to the conventional base-10 (decimal) system. I know it will not make much difference for advanced mathematics, but it will do for everyday life. In the dozenal system, there are 12 symbols, introducing new symbols for the numbers 10 and 11, labeled as “dek” and “el” respectively. The dozenal system could potentially simplify day-to-day arithmetic, particularly in dealing with fractions, owing to the greater number of factors 12 possesses compared to 10. 12 has 1, 2, 3, 4, 6, and 12 while 10 only has 1, 2, 5, and 10. Hence, multiplication and division could be more straightforward and visually regular in the dozenal system. For instance, the representation of fractions like 1/3 and 1/4 in the dozenal system showcases cleaner and more intuitive outcomes. Practically, people wonder what the 1/3 and 1/4 of a quantity is and not the 1/5 or 1/10 of it.

The French Revolution’s attempted to decimalize various aspects of society, including timekeeping. However, this effort didn’t gain widespread acceptance. Grime acknowledges that, while the choice of counting base may not significantly impact advanced mathematics, a base-12 system could offer practical advantages in everyday scenarios.

The French Revolution advocated for the decimalization of various aspects of society aiming to establish a coherent and standardized approach to weights and measures. They believed that a decimal system, with its ease of calculation and conversion, would simplify trade, commerce, and daily life. Decimalization was seen as a way to promote equality and eliminate the privileges associated with regional variations in measurement standards. In the context of timekeeping, the French Revolution attempted to decimalize the calendar, creating a ten-day week and a year divided into ten months. This was part of a broader effort to break with the perceived tyranny of the old regime and establish a new, rational order in all aspects of society. The ten-day week and decimal calendar were eventually abandoned, as people found it challenging to adapt to these changes in their daily lives.

On the other hand, one notable example of a culture historically using a base-12 counting system is the ancient Babylonians. The Babylonians developed a sexagesimal (base-60) numeral system, which is a combination of base-10 and base-6. This system is evident in their mathematics, astronomy, and measurements.

In their sexagesimal system:

- **The number 12 had particular significance.** They had 12 as a basic unit and used it in various aspects of their culture.
- **The division of the day and night into 12 hours each.** While this is similar to our current use of a 24-hour day, the Babylonians divided each hour into 60 minutes and each minute into 60 seconds, showcasing their base-60 system.
- **The division of a circle into 360 degrees.** This choice is likely related to the ease of working with the highly composite number 60.

The legacy of the Babylonian sexagesimal system is still seen today in the way we measure time and angles (360 degrees in a circle, 60 minutes in an hour, and 60 seconds in a minute). While not a perfect base-12 system, it demonstrates a historical example of a culture incorporating the number 12 prominently in its numerical and mathematical systems.