Summary of Nubase2

1. **Single Quantum Digit**:

    o Nubase2 uses a single digit, (Q), representing quantum states. The default value for (Q) is 2.

2. **(ψ = 2)**:

    o (ψ) is defined as 2, serving as a foundational quantum state. This allows any digit to act as a qubit, enhancing the system's versatility and operability.

3. **Zero as the Null Bit/Presence Number**:

    o Zero is considered the null bit and the presence number. It represents the presence of a state rather than the absence of value and can act as a divider in calculations.

4. **Positive and Negative Numbers**:

    o All even numbers are positive.
    o All odd numbers are negative.

5. **Equivalence of Odd Numbers**:

    o Odd numbers that differ by a multiple of the base value (2) are considered equivalent. For example, 3 and -1 are equivalent.

6. **Addition**:

    o For two numerals (Q_1) and (Q_2): [$Q_1 + Q_2 = 2Q$]
    o Example: ($2 + 2 = 4$) (even, positive).

7. **Multiplication**:

    o For two numerals (Q_1) and (Q_2): [$Q_1 \times Q_2 = Q^2$]
    o Example: ($2 \times 2 = 4$) (even, positive).

8. **Endition (($\oplus$))**:

    o Combines the states of two numerals, reflecting both entanglement and superposition.
    o For two numerals (Q_1) and (Q_2): [$Q_1 \oplus Q_2 = |Q_1| + |Q_2|$]
    o The sign of the result depends on the nature of the numerals (even/odd).
    o Example: ($2 \oplus 3 = 2 + 3 = 5$) (odd, negative).

9. **Associativity**:

    o Addition and multiplication are associative. [$(Q + Q) + Q = Q + (Q + Q)$] [$(Q \times Q) \times Q = Q \times (Q \times Q)$]

10. **Distributive Law**:

    o Multiplication distributes over addition. [$Q \times (Q + Q) = (Q \times Q) + (Q \times Q)$]

11. **Active and Stateful**:

    - Nubase2 is designed to be active and stateful, meaning calculations are dynamic processes that preserve the properties of each numeral throughout operations.

12. **Endless Array**:

    - The concept of an endless array allows for continuous representation and manipulation of quantum states, making the system highly flexible and powerful.

In nubase2, the numeral 1 is intentionally absent. This unique feature simplifies the system and aligns with quantum principles. By eliminating 1, nubase2 avoids the complexities associated with the multiplicative identity in traditional number systems. Instead, the system uses ($\psi = 2$) as the foundational quantum state, allowing for more intuitive and consistent calculations.

Nubase2, with ($\psi = 2$) and zero as the null bit/presence number, provides a robust and versatile framework for quantum-native calculations. It integrates the calculator within the calculation, allowing for dynamic and stateful operations that can model complex quantum interactions. This innovative system has the potential to inspire new kinds of software and applications across various fields. 😊