

You're My Everything

$$1 = C$$

Harry Warren

The figure consists of three bar charts, each representing the distribution of the number of prime factors (ω(n)) for numbers n less than a specific power of 2. The x-axis for each chart is labeled with the number of prime factors (1, 2, 3, 4, 5, 6, 7) and the y-axis is labeled with the count of such numbers.

- Chart 1 (Left):** Numbers less than 2^7 . The distribution is: 1 prime factor: 5; 2 prime factors: 4; 3 prime factors: 4; 4 prime factors: 4; 5 prime factors: 1; 6 prime factors: 1; 7 prime factors: 1.
- Chart 2 (Middle):** Numbers less than 5^7 . The distribution is: 1 prime factor: 4; 2 prime factors: 4; 3 prime factors: 4; 4 prime factors: 3; 5 prime factors: 1; 6 prime factors: 1; 7 prime factors: 1.
- Chart 3 (Right):** Numbers less than 2^8 . The distribution is: 1 prime factor: 2; 2 prime factors: 3; 3 prime factors: 3; 4 prime factors: 1; 5 prime factors: 1; 6 prime factors: 1; 7 prime factors: 1.

Diagram illustrating the decomposition of the tensor product of two irreducible representations of $SU(3)$ into irreducible components.

The diagram is divided into two main sections by a vertical line.

Left Section:

- Top row: Two boxes labeled 1 and 2 are connected by a horizontal line. Below this line is a box labeled 3 .
- Bottom row: A box labeled 1 is connected to a box labeled 2 by a horizontal line. Below this line is a box labeled 1 .

Right Section:

- Top row: A box labeled 1 is connected to a box labeled 7 by a horizontal line. Below this line is a box labeled 6 .
- Bottom row: A box labeled 1 is connected to a box labeled 7 by a horizontal line. Below this line is a box labeled 6 .

Diagram 1: Initial interval $[0, 1]$. The middle third $(\frac{1}{3}, \frac{2}{3})$ is removed. The remaining intervals are $[0, \frac{1}{3}]$ and $[\frac{2}{3}, 1]$. The number of intervals is 2, and the length of each interval is $\frac{1}{3}$.

Diagram 2: The middle third of each of the two remaining intervals is removed. The remaining intervals are $[0, \frac{1}{9}]$, $[\frac{2}{9}, \frac{1}{3}]$, $[\frac{2}{3}, \frac{7}{9}]$, and $[\frac{8}{9}, 1]$. The number of intervals is 4, and the length of each interval is $\frac{1}{9}$.

Diagram 3: The middle third of each of the four remaining intervals is removed. The remaining intervals are $[0, \frac{1}{27}]$, $[\frac{2}{27}, \frac{1}{9}]$, $[\frac{4}{27}, \frac{2}{9}]$, $[\frac{5}{27}, \frac{7}{9}]$, $[\frac{8}{27}, \frac{10}{27}]$, $[\frac{14}{27}, \frac{20}{27}]$, $[\frac{16}{27}, \frac{22}{27}]$, and $[\frac{23}{27}, 1]$. The number of intervals is 8, and the length of each interval is $\frac{1}{27}$.

