

*Let 's Dance*

$$1 = F$$

*Jim Lee*

The diagram shows a 3x3 grid with numbers in the cells. The numbers are: 1, 1, 1, 1, 1, 1, 1, 1, 1. The numbers are arranged in a 3x3 grid. The first row contains 1, 1, 1. The second row contains 1, 1, 1. The third row contains 1, 1, 1. To the right of the grid is a sequence of numbers: 1, 1, 1, 1, 1, 1, 1, 1, 1. The sequence is arranged in a single row. The numbers are: 1, 1, 1, 1, 1, 1, 1, 1, 1.

The diagram illustrates a sequence of numbers arranged in two rows, separated by a vertical line. The numbers are represented by light blue rectangular boxes. In the first row (top), the sequence is 3, 3, 5, 5, 5, 6, 1, 5, 6. In the second row (bottom), the sequence is 1, 1. The vertical line is positioned between the fifth and sixth numbers of the first row.

The diagram illustrates the decomposition of the tensor product of two 4-dimensional representations of  $SU(4)$  into irreducible representations. The diagram is divided into four sections by vertical lines. Each section shows a set of horizontal bars representing the Young diagrams of the irreducible components. The first section shows the decomposition of  $4 \otimes 4$  into  $6 \oplus 3 \oplus 1$ . The second section shows the decomposition of  $4 \otimes 4$  into  $6 \oplus 3 \oplus 1$ . The third section shows the decomposition of  $4 \otimes 4$  into  $6 \oplus 3 \oplus 1$ . The fourth section shows the decomposition of  $4 \otimes 4$  into  $6 \oplus 3 \oplus 1$ .

The left diagram illustrates the first step of the merge sort algorithm. It shows an array of six elements, all with the value 7. The array is split into two sub-arrays of three elements each, both containing the value 7. These sub-arrays are then merged back into a single array of three elements, all with the value 6. The number 5 is written below the first vertical line, and the number 4 is written below the second vertical line.

The right diagram illustrates the second step of the merge sort algorithm. It shows an array of six elements, all with the value 7. The array is split into two sub-arrays of three elements each, both containing the value 7. These sub-arrays are then merged back into a single array of six elements, all with the value 6. The number 5 is written below the first vertical line, and the number 4 is written below the second vertical line.

Diagram illustrating the decomposition of the tensor product of two irreducible representations of  $SU(3)$  into irreducible representations of the subgroup  $SU(2)$ .

The diagram is divided into four sections by vertical lines, showing the decomposition of the tensor product of two irreducible representations of  $SU(3)$  into irreducible representations of the subgroup  $SU(2)$ .

**Section 1 (Leftmost):** Shows the decomposition of the tensor product of two fundamental representations ( $1$  and  $1$ ) into a singlet ( $1$ ) and an octet ( $8$ ).

**Section 2:** Shows the decomposition of the tensor product of two octet representations ( $8$  and  $8$ ) into a singlet ( $1$ ), a triplet ( $3$ ), and a sextet ( $6$ ).

**Section 3:** Shows the decomposition of the tensor product of a triplet and a triplet-bar representation ( $3$  and  $3$ ) into a singlet ( $1$ ) and a sextet ( $6$ ).

**Section 4 (Rightmost):** Shows the decomposition of the tensor product of a triplet and a triplet representation ( $3$  and  $3$ ) into a singlet ( $1$ ) and a sextet ( $6$ ).