

**DISCRETE MATHEMATICS**  
**Knowledge has Organizing Power**

**Theme 3**  
**RECURRENCE RELATIONS AND COUNTING**  
**Self-Referral Dynamics**

**LESSON 11**  
**COUNTING TECHNIQUES**  
**Establishing the Field of All Possibilities in our Awareness**

**Wholeness of the Lesson**

Whenever we need to know how many possible objects of a certain type there are, we can use systematic counting techniques.

*Science and Technology of Consciousness:* In our own lives, we use the Transcendental Meditation technique to contact and enliven the field of all possibilities deep within our consciousness.

**Main Points**

1. The fundamental principle of counting is the multiplication principle, which gives the number of different possibilities for making two choices: if there are  $m$  ways to make the first choice and  $n$  ways to make the second choice, there are  $mn$  ways to make both choices. Other principles of counting follow from this principle.

*Science and Technology of Consciousness:* By handling the simplest level of life, our own consciousness, we can handle all other levels of life.

2. The sum principle says that if one choice is made from a set  $m$  or from a set of  $n$  elements, there are  $m + n$  different possible ways to make the choice.

*Science and Technology of Consciousness:* By handling the simplest level of life, our own consciousness, we can handle all other levels of life.

3. The pigeonhole principle says that if there are more objects than pigeonholes, you will have to put at least two objects in some pigeonhole. This principle works because you must consider all possible pigeonholes.

*Science and Technology of Consciousness:* When we meditate, we contact and enliven the source of all possibilities deep within.

# UNITY CHART

## Connecting the Parts of Knowledge

## Counting

1. Counting techniques make counting easier and faster.
2. Counting techniques ensure that we have considered all possibilities in a particular situation.

3. **Transcendental Consciousness** is undifferentiated wholeness, where counting doesn't exist.
4. **Impulses within the transcendental field:** : The first impulses within the transcendental field create differences, number, and counting.
5. **Wholeness moving within itself:** In Unity Consciousness, we see all diversity in terms of the unity of the Self.

