

$$P(\text{Diagram 1}) = \text{Diagram 2} + \text{Diagram 3} + \text{Diagram 4} + \text{Diagram 5}$$

The diagram illustrates a probability distribution P over different states of a system. The system is represented by a horizontal bar divided into four segments: gray, blue, orange, and gray. An arrow indicates a process moving from left to right.

The left side of the equation shows the probability P of a specific state (Diagram 1), where a blue, irregular shape is positioned over the blue and orange segments.

The right side of the equation shows the sum of four states (Diagrams 2, 3, 4, and 5), each representing a different configuration of the system:

- Diagram 2: A blue, irregular shape is positioned over the blue and orange segments.
- Diagram 3: A red, irregular shape is positioned over the blue and orange segments.
- Diagram 4: A purple, irregular shape is positioned over the blue and orange segments.
- Diagram 5: A gray, irregular shape is positioned over the blue and orange segments.