

$$\begin{array}{c}
 \begin{array}{c}
 \text{\textit{D}} \\
 \hline
 \text{1PI} \\
 \hline
 \text{\textit{D}}
 \end{array} \\
 \Sigma_{\text{melonic}}
 \end{array}
 =
 \begin{array}{c}
 G_{\text{melonic}} \\
 \begin{array}{c}
 \text{\textit{D}} \quad \text{\textit{D}} \\
 \text{\textit{D}} - 1 \quad \text{\textit{D}} - 1
 \end{array}
 \end{array}
 =
 \lambda \bar{\lambda} (G_{\text{melonic}})^{\text{\textit{D}}}$$

The diagram illustrates a relationship between three types of Feynman diagrams in a melonic theory. On the left, a circle labeled "1PI" is connected to two external lines, each labeled with the dimension D . Below this is the label Σ_{melonic} . This is set equal to a second diagram, which is a loop structure labeled G_{melonic} at the top. The loop consists of two shaded circular vertices connected by two arcs. The left arc is labeled with 0 at the top and $D-1$ at the bottom. The right arc is also labeled with 0 at the top and $D-1$ at the bottom. A vertical dashed line connects the two vertices. External lines are attached to the vertices: a line labeled D enters the left vertex, and a line labeled D exits the right vertex. This second diagram is then set equal to the expression $\lambda \bar{\lambda} (G_{\text{melonic}})^D$.