

$$\begin{array}{c} \bigoplus \\ a \end{array} \mathcal{H} \left( \begin{array}{c} \text{annulus} \\ a \\ M \end{array} \right) \amalg \left( \begin{array}{c} \text{disk} \\ \hat{a} \\ N \end{array} \right) \xrightarrow{\cong} \mathcal{H} \left( \begin{array}{c} \text{annulus} \\ N \\ M \end{array} \right)$$

The diagram illustrates an isomorphism between two mathematical structures. On the left, a direct sum of a vector space  $\bigoplus$  (labeled  $a$ ) and a Hilbert space  $\mathcal{H}$  is shown. The Hilbert space is represented by a shaded annulus with an inner hole (labeled  $a$ ) and an outer boundary (labeled  $M$ ). This is followed by a direct sum symbol  $\amalg$  and a shaded disk (labeled  $\hat{a}$ ) containing a point  $N$ . An arrow labeled  $\cong$  points to the right, where the structure is simplified to a single Hilbert space  $\mathcal{H}$  represented by a shaded annulus with an inner hole (labeled  $N$ ) and an outer boundary (labeled  $M$ ).