

$$\begin{aligned}
 & \text{Diagram 1: } t_0 \xrightarrow{\text{thick arrow}} t \quad = \quad \text{Diagram 2: } t_0 \xrightarrow{\hat{U}_0} t \quad + \quad \text{Diagram 3: } t_0 \xrightarrow{\tau_1} \hat{H}' \xrightarrow{\tau_1} t \quad + \quad \dots \\
 & \text{Diagram 4: } t_0 \xrightarrow{\tau_2} \hat{H}' \xrightarrow{\tau_1} \hat{H}' \xrightarrow{\tau_1} t \quad + \quad \text{Diagram 5: } t_0 \xrightarrow{\tau_3} \hat{H}' \xrightarrow{\tau_2} \hat{H}' \xrightarrow{\tau_1} \hat{H}' \xrightarrow{\tau_1} t \quad + \quad \dots
 \end{aligned}$$

The image shows a diagrammatic expansion of a propagator. The first row shows a thick arrow from t_0 to t equal to a thin arrow labeled \hat{U}_0 , plus a diagram with a vertex \hat{H}' and two edges labeled τ_1 . The second row continues the expansion with diagrams involving multiple vertices and edges labeled τ_i .