

$$\begin{array}{ccccc}
 ((b \diamond c) \diamond d) \diamond e & \longrightarrow & (b \diamond (c \diamond d)) \diamond e & \longrightarrow & b \diamond ((c \diamond d) \diamond e) \\
 \downarrow & & & & \downarrow \\
 (b \diamond d) \diamond (d \diamond e) & \longrightarrow & b \diamond (c \diamond (d \diamond e)) & & c \diamond d
 \end{array}$$

The diagram illustrates a series of transformations involving the diamond operator (\diamond). The top row shows three expressions: $((b \diamond c) \diamond d) \diamond e$, $(b \diamond (c \diamond d)) \diamond e$, and $b \diamond ((c \diamond d) \diamond e)$, connected by right-pointing arrows. The bottom row shows two expressions: $(b \diamond d) \diamond (d \diamond e)$ and $b \diamond (c \diamond (d \diamond e))$, also connected by a right-pointing arrow. A vertical arrow points down from the first expression of the top row to the first expression of the bottom row. Another vertical arrow points down from the second expression of the top row to the second expression of the bottom row. A diagonal arrow points down from the third expression of the top row to the expression $c \diamond d$, which is positioned below the right side of the bottom row.