



$$L_4^8 \circ h_{2j+1}^{2 \rightarrow 8} \rightarrow h_{j+4}^{2 \rightarrow 8}$$

$$\left\lfloor \frac{(2j+4)}{8} \right\rfloor = j$$

$$L_4^8 : i \mapsto \left\lfloor \frac{i}{2} \right\rfloor + 4(i \bmod 2)$$

$$i' = h_{2j+1}^{2 \rightarrow 8}(i) = 2j + i$$

$$L_4^8(i') = \left\lfloor \frac{2j+i}{2} \right\rfloor + 4((2j+i) \bmod 2)$$

$$\left\lfloor \frac{2j}{2} + \frac{i}{2} \right\rfloor = j + \left\lfloor \frac{i}{2} \right\rfloor = j$$

$0 \leq i < 2$

$$4 \cdot ((2j+i) \bmod 2)$$

$$\text{or } 0 \leq i < 2$$

$$(2j+i) \bmod 2 = i \bmod 2 = i$$

$$L_4^8 \circ h_{4j+4, 2}^{2 \rightarrow 8}$$

$$0 \leq j < 2$$

$$0 \leq k < 2$$

$$h_{\substack{8 \rightarrow 2 \\ 2, 2}} \rightarrow h_{\substack{4 \rightarrow 2 \\ 2, 2}} \rightarrow L_4 \Rightarrow h_{\substack{2 \rightarrow 2 \\ 2, 2}}$$

