Rotation for Leaf Nodes: From Right to Left

$$\ldots \; y \;\; x \;\; z \ldots$$

$$p_1 \, j_1 \; \ldots \; p_m \, j_m \qquad\qquad q_1 \, k_1 \; \ldots \; q_n \, k_n$$

$$\ldots \; y \;\; k_2 \;\; z \ldots$$

$$p_1 \, j_1 \; \ldots \; p_m \, j_m \; q_1 \, k_1 \qquad\qquad q_2 \, k_2 \; \ldots \; q_n \, k_n$$
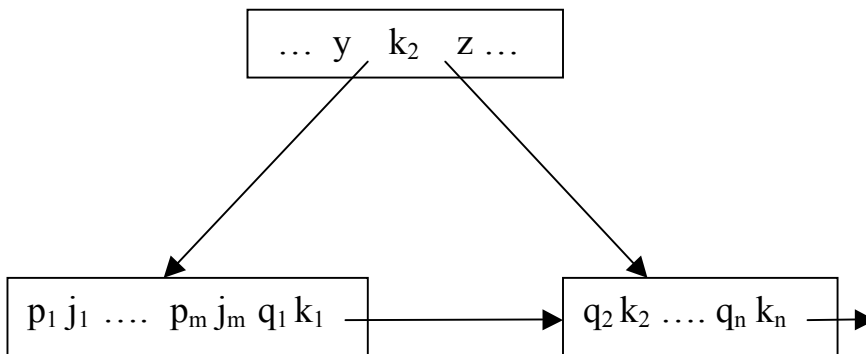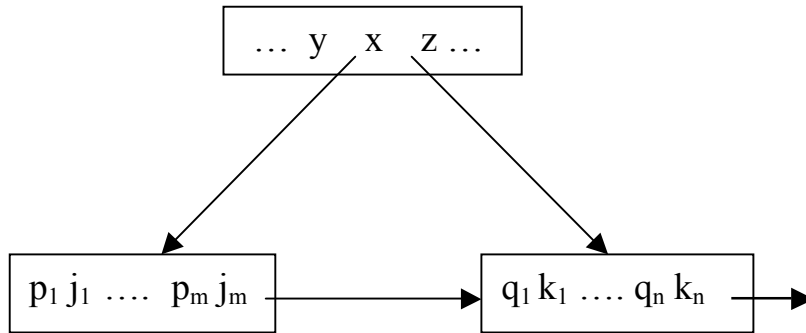
q_1 and k_1 move to the left node; k_2 replaces x in the parent node. Can be used if $n \geq \lceil N/2 \rceil$ and $m < N-1$ to eliminate overflow in the right node or underflow in the left node.