

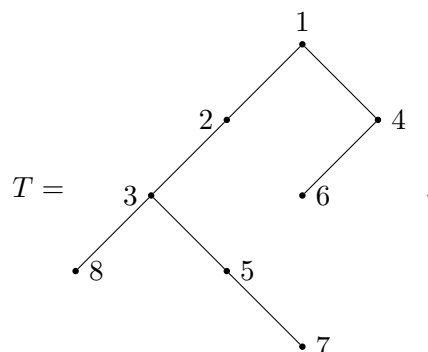
Exercise 35. (a) For the following permutations w , draw $T(w)$ and $T'(w)$. Verify that $T(w)$ and $T'(w)$ are increasing.

(i) $w = 68412537$

(ii) $w = 12345$

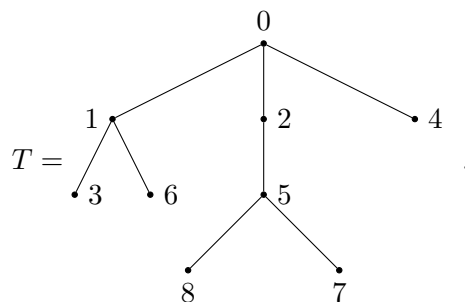
(iii) $w = 54321$

(b) Let



If $T = T(w)$, what is w ? Verify that the double rises, double descents, valleys, and peaks of w correspond to the correct behavior of successors.

(c) Let



If $T = T'(w)$, what is w ? Verify the following for $T'(w)$.

(i) The successors of 0 are just the left-to-right minima of w .

(ii) The leaves are $D(w) \cup \{n\}$.

(d) Briefly justify each of (a)–(c) in Proposition 1.5.3 of EC1.

(e) Briefly justify each of (a)–(c) in Proposition 1.5.5 of EC1.