Glossary

descent of a permutation A permutation ω is said to have a descent at i if $\omega(i) > \omega(i+1)$.

distributive lattice We say that a lattice L is distributive if

$$x \vee (y \wedge z) = (x \vee y) \wedge (x \vee z)$$

for all elements x, y and z of L.

EL-labeling An edge-labeling of a poset P is said to be an EL-labeling if it satisfies the following 2 conditions:

1. Every interval $[x, y]$ of P has exactly one maximal chain with increasing labels
2. This chain has the lexicographically least set of labels

lattice A lattice is a poset for which every two elements x and y of P have a least upper bound and a greatest lower bound. We call the least upper bound the **join** of x and y and denote it by $x \vee y$. We call the greatest lower bound the **meet** of x and y and denote it by $x \wedge y$.

M-chain See *supersolvable lattice*

order ideal A subset I of a poset P is an order ideal if for every $x \in I$ and $y \leq x$ we have that $y \in I$.

permutation A bijective map from $\{1, 2, \ldots, n\}$ to itself.

poset Think Hasse diagram. Formally, a poset P is a set (also called P) together with a relation $\leq$, with the following properties:

1. *Reflexivity:* $x \leq x$ for all $x \in P$
2. *Antisymmetry:* If $x \leq y$ and $y \leq x$ then $x = y$
3. *Transitivity:* If $x \leq y$ and $y \leq z$ then $x \leq z$

S_n EL-labeling An EL-labeling in which the labels along any maximal chain form a permutation.

supersolvable lattice A finite lattice L is said to be supersolvable if it contains a maximal chain $\mathfrak{m}$, called an M-chain of L, which together with any other chain of L generates a distributive sublattice.

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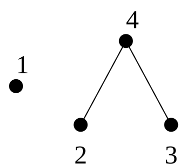
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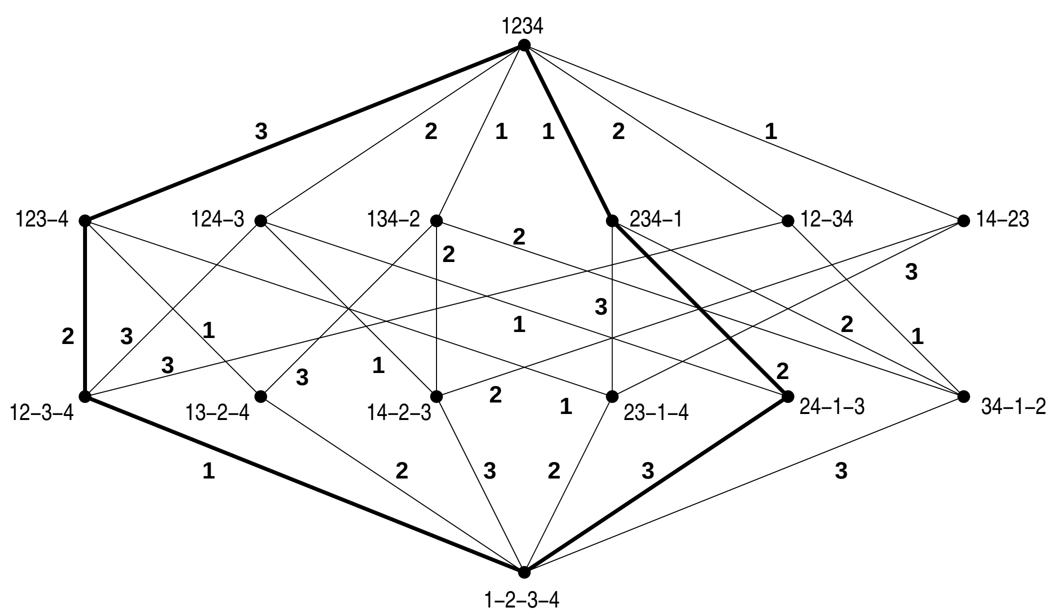
J(P)=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