

Math555 Homework 13 [Optional]

Note: To submit the k -th homework, simply put your files in the folder `HWk` on CoCalc, and it will be collected on the due day.

1. Prove that the poset D_{12} and the poset D_{175} are isomorphic. That is, find a bijection between the factors of 12 and the factors of 175 that preserve the relation.
2. Use Sage to write a function that constructs the comparability graph of the poset D_n . Then compute the height and the width of D_n for $n = 1, \dots, 10$. See the file `SageProject8_blank.sagews` in your CoCalc folder.