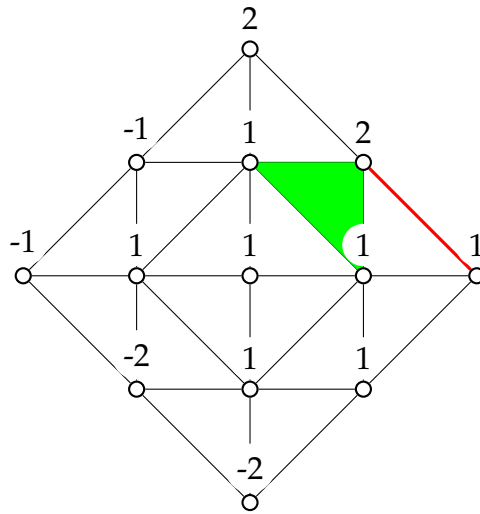


Math589 Homework 11

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.

- Let T be a special triangulation of B^2 as below. Assign a labeling that is antipodal on the boundary. Then find a happy tight simplex (other than \emptyset) and a happy loose simplex (other than $\{0\}$). [You may draw by hand if necessary.]

Solution. The red simplex is tight, while the green simplex is loose.



2. Use the same labeling you gave in Problem 1. Find a path in the “constructed graph” going from $\{0\}$ to a simplex that contains a complementary edge. [You may draw by hand if necessary.]

Solution. The path is shown in the graph

