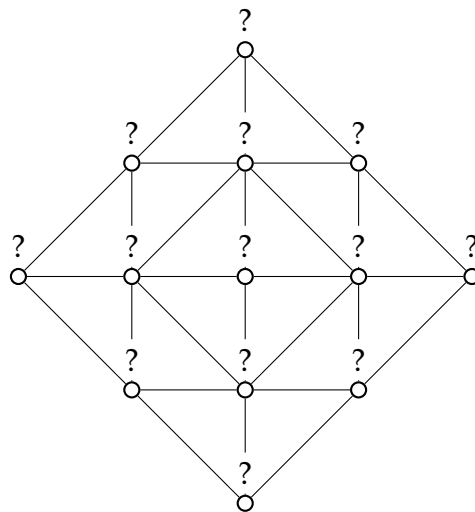


# Math589 Homework 11

**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.]



- 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.]