1. Verify observations (3) and (4) from the computation of $H_1(T)$ and $H_2(T)$ done in lecture:

(3) - If $\gamma'$ is a 2-chain in $T$ with $\partial \gamma'$ in $M$, then $\gamma' = n\gamma$.

(4) - $\partial \gamma = 0$

2. Compute $H_1(P)$ and $H_2(P)$ where $P$ is a simplicial complex whose underlying space is the projective plane. (Make sure to draw all necessary figures clearly, label all simplices and orientations, and explain all of your reasoning.)

3. Compute $H_1(K, K_0)$ and $H_2(K, K_0)$, for the $K$ and $K_0$ defined on the last page of today’s notes. (Make sure to draw all necessary figures clearly, label all simplices and orientations, and explain all of your reasoning.)