MATH 611 FINAL

HIDENORI SHINOHARA

Exercise. (Problem 2) Figure 1 shows how $K_{3,3}$ is homotopy equivalent to $S_1 \vee S_1 \vee S_1 \vee S_1$. Thus the Van Kampen theorem implies that the fundamental group is the free group generated by 4 elements $\langle a, b, c, d \rangle$ where each generator corresponds to each S_1.

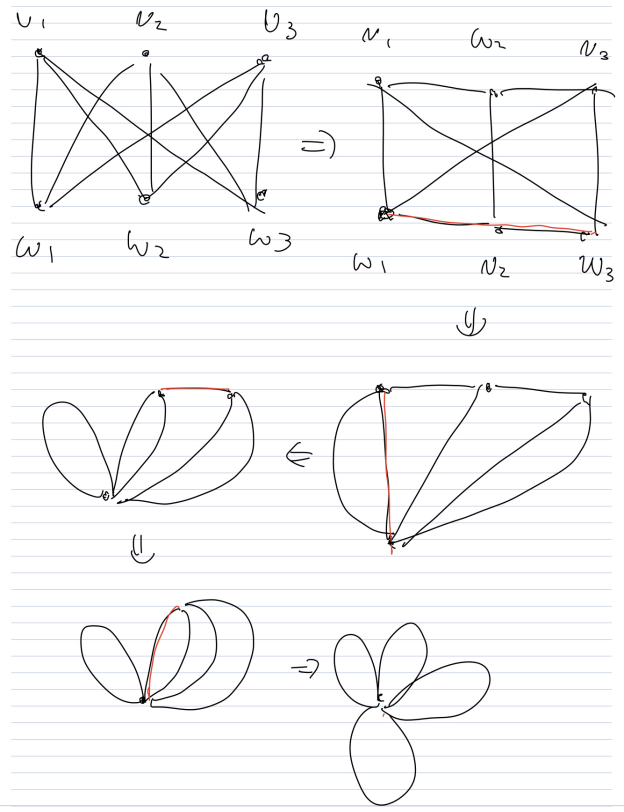

FIGURE 1. $K_{3,3}$