Problems to Think About

Friday, September 2, 2016

1. Recall the "snail shell" space discussed on Friday, given by a closed triangle in the plane, with all edges identified to each other according to arrows drawn on the edges. Two of the arrows point clockwise, one points counter-clockwise. Hopefully you have a picture in your notes. Think of a homotopy that shows that this space is contractible.

2. Classify the CW complexes consisting of a 2-cell with $2n$ edges, with pairs of edges identified.

3. Fill in the details of the construction of the universal cover $\overline{X}$ of X outlined in the lecture. (What is the topology on $\overline{X}$? Show that it is a covering space).