

Assignment 9; Due Wednesday, December 2

Notice that this homework covers work from the last two weeks of class and is due on the last day of class. Read section eleven on manifolds and surfaces, and skim section twelve on path connected spaces. Then do the following problems:

- 12.10 af
- Consider the hexagon with surface symbol $abca^{-1}b^{-1}c^{-1}$. Do all vertices on this diagram correspond to the same point on the surface? If not, how many points on the surface correspond to vertices on the diagram? Use our general procedure for classifying surfaces to reduce this symbol to canonical form and thus determine the surface. What is it?
- Repeat the previous exercise for the surface symbol $abcd a^{-1}b^{-1}c^{-1}d^{-1}$.
- Repeat the previous exercise for the symbol $abcd b^{-1}d^{-1}c^{-1}$.
- Which of our standard surfaces is homeomorphic to the surface pictured below?

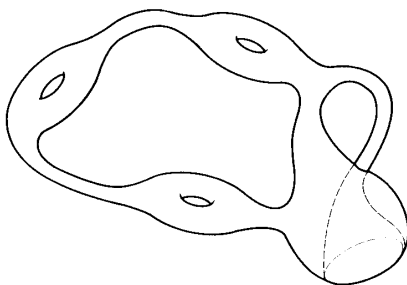


Figure 7.17

- Are the surfaces shown below homeomorphic?

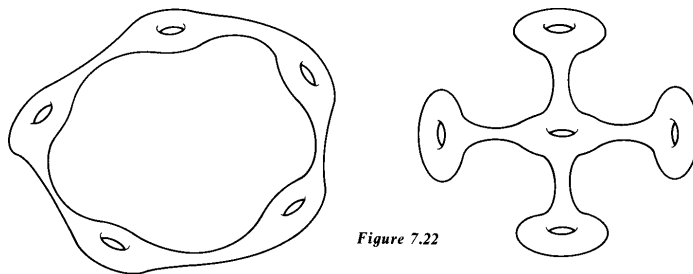


Figure 7.22