

Homework 2

Due: Feb 6

1. Consider the usual cell structure on S^n consisting of one 0-cell and one n -cell. Also consider the standard cell structure on I given by two 0-cells connected by a 1-cell. Describe the cell structure on SS^n , the suspension of S^n .
2. Show that the smash product $S^m \wedge S^n$ is S^{m+n} by considering the induced cell structure on $S^m \wedge S^n$.
3. Hatcher Exercise 1.1.1 (p. 38).
4. Hatcher Exercise 1.1.2 (p. 38).
5. Hatcher Exercise 1.1.3 (p. 38).
6. Hatcher Exercise 1.1.5 (p. 38).
7. Hatcher Exercise 1.1.7 (p. 38).
8. Hatcher Exercise 1.1.16 (p. 39).

Think about the following, but do NOT turn in:

- Hatcher Exercise 1.1.6 (p. 38).
- Hatcher Exercise 1.1.10 (p. 39).