Writing Assignment 8

Due Monday, April 12, 11:59 PM

(a) Show me three different ways to construct S^2 as a CW complex.

   (Another way to put this: Construct three CW complexes that are homeomorphic to S^2. You do not need to prove that your CW complexes are homeomorphic to S^2, though I will take off points if they are not.)

(b) Verify that the Euler characteristic of each is 2.

(c) Now write down three different ways to construct T^2 (otherwise known as a torus, otherwise known as $S^1 \times S^1$) as a CW complex.

(d) What is the Euler characteristic of each?