

**MATH 634 HOMEWORK 1
DUE SEPTEMBER 28, 2018.**

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Updated September 13, 2018.

Reminder: homework is due at the *beginning* of class, handed to me or in my mailbox on the second floor of Fenton.

- (1) Describe (precisely) a CW complex homeomorphic to
 - (a) $S^1 \times S^1$
 - (b) $S^1 \times S^1 \times S^1$
 - (c) the Möbius band.

Prove your answer in at least one case.

- (2) Prove that any finite CW complex is locally path connected.
- (3) Hatcher, Exercise A.2 (p. 529).
- (4) Hatcher, Exercise A.3 (p. 529). (You may assume X is finite.)

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