

MATH 636 SPRING 2024
HOMEWORK 2
DUE APRIL 15, 2024
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Required problems:

- (1) Hatcher 3.3.2 (p. 257).
- (2) Hatcher 3.3.6 (p. 257). (Hint: consider the quotient map $M_1 \# M_2 \rightarrow M_1 \vee M_2$, not the Mayer-Vietoris sequence; if you use the Mayer-Vietoris sequence, I think you'll need problem 3.3.31, which will be on the homework next week.)
- (3) Hatcher 3.3.8 (p. 257). (The definition of degree is given in problem 3.3.7.)
- (4) Hatcher 3.3.10 (p. 257). (You may assume problem 3.3.9.)

This hint
is bad.

Optional problems:

Some good qual-level problems:

- Hatcher 3.3.3, 3.3.4, 3.3.5, 3.3.7, 3.3.9, 3.3.11, 3.3.20.

Some more problems to think about but not turn in:

- Hatcher 3.3.12, 3.3.13, 3.3.16, 3.3.18, 3.3.17.

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