

**MATH 636 SPRING 2024
HOMEWORK 5
DUE MAY 6, 2024**

INSTRUCTOR: ROBERT LIPSHITZ

Required problems:

- (1) Hatcher 4.1.16 (p. 359). (Hint: build Z by attaching cells to X .)
- (2) Hatcher 4.1.17 (p. 359).
- (3) Hatcher 4.1.19 (p. 359).
- (4) Hatcher 4.1.20 (p. 359).

Optional problems:

- Hatcher 4.1.22, 4.1.23.

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