

Homework Problems Related to Chapter 2 Concepts.

Due: February 22.

Prove or disprove the following statements.

10. Every starlike set in  $\mathbb{R}^n$  is convex.
11. The set  $P = \{x \in \mathbb{R}^n \mid \|x\|_\infty \leq 1\}$  is a polyhedron.
12. The set of optimal points of a linear program is a polyhedron.

Complete the following textbook problems.

13. Exercise 2.3. You do not need to provide a proof.
14. Exercise 2.10.
15. Exercise 2.11.
16. Exercise 2.12.