

Convex Analysis, Sect. 4.2

Exercise 1

Use the definition of the conjugate twice.

Exercise 3

$$\text{epi } \max\{f_1, f_2\} = \text{epi } f_1 \cap \text{epi } f_2.$$

Exercise 7

Use Fenchel–Young inequality.

Exercise 17

- (a) Use Exercise 7 and Exercise 3.3.9 (f).
(a) \implies (b)