Problems - 6.1

(1) Show that $\mathbb{R}^n$ with metric

$$d(x, y) = \max_{1 \leq i \leq n} |x_i - y_i|$$

is a metric space.

(15) Let S be the set of all absolutely convergent series. Show that S with metric

$$d(x, y) = \sum_{i=1}^{\infty} |x_i - y_i|$$

is a metric space.