

Worksheet 10 — Multiclass linear classification

1. A linear predictor is used to solve a classification problem with three classes. The data is two-dimensional and the linear functions for each class are:

- Class 1: $w_1 = (1, 1)$, $b_1 = 0$
- Class 2: $w_2 = (1, 0)$, $b_2 = 1$
- Class 3: $w_3 = (0, 1)$, $b_3 = -1$

Draw the resulting decision boundary and clearly mark the region corresponding to each class.