

# Machine Learning 2 — Homework 2

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## Problem 1.

1.

We have the discrete random variables  $X, Y, Z$ . Mutual information than is:

$$I(X; y) =$$

The conditional mutual information is:

$$I(X; Y|Z) =$$

2.

We have  $x, y, z \in \{0, 1\}$  with  $p(x, y, z)$ .

$$I(X; Y) =$$

3.

$$I(X; Y|Z) =$$

4.

## Problem 2.

## Problem 3.

1.

2.