

## Examples

- 1 Let  $A = B = \mathbb{R}$ , and define

$$\mathcal{R} = \{(x, y) \in \mathbb{R}^2 : x < y\}$$

This is the “less than” relation.

- 2 Let  $f: A \rightarrow B$ , and define

$$\mathcal{R} = \{(x, f(x)) : x \in A\}.$$

Sometimes called the “graph” of  $f$ .

- 3 Let  $A$  be any set, and define

$$\mathcal{R} = \{(a, a) : a \in A\} \subseteq A \times A.$$

The “equals” relation, or the “diagonal” relation.