

Definition

Let \sim be an equivalence relation on A . The **equivalence class** of $x \in A$ is the set

$$[x] = \{y \in A : y \sim x\},$$

that is to say,

$$y \in [x] \iff y \sim x.$$

Definition

We also define the **quotient of A with respect to \sim** , denoted A/\sim , as the collection of equivalence classes

$$\{[x] : x \in A\}.$$