Definition (Properties of endorelations). An endorelation $R \subseteq \mathbf{A} \times \mathbf{A}$ is:

- *Symmetric* if for $x, x' \in \mathbf{A}$:

$$\frac{\langle x, x' \rangle \in R}{\langle x', x \rangle \in R}$$

- *Reflexive* if $\forall x \in \mathbf{A}$: $\langle x, x \rangle \in R$;
- *Transitive* if for $x, x', x'' \in \mathbf{A}$:

$$\frac{\langle x, x' \rangle \in R \quad \langle x', x'' \rangle \in R}{\langle x, x'' \rangle \in R}$$