Equivalence Relations

Prove $\{(a, b): a - b \in \mathbb{Z}\} \subseteq \mathbb{R}\times\mathbb{R}$ is an equivalence relation. What is an equivalence class?

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Prove $\{(a,b): a|b\} \subseteq \mathbb{Z}\times\mathbb{Z}$ is reflexive and transitive but not symmetric

Equivalence Relations

Decide if equivalence relation. If yes, what are equivalence classes? (S = set of all people who ever lived)

- $\{(a, b)$: a, b have the same parents$\} \subseteq S \times S$
- $\{(a, b)$: a, b share a parent$\} \subseteq S \times S$