

Example: Let $A = \{\text{all lines in } \mathbb{R}^2\}$.

$l_1 R l_2 \iff l_1 \text{ intersects } l_2$.

reflexive? Yes: l_1 intersects itself for any l_1 .

symmetric? Yes: if l_1 intersects l_2 , then l_2 intersects l_1 .

transitive? NO!

