

L7.4.71.

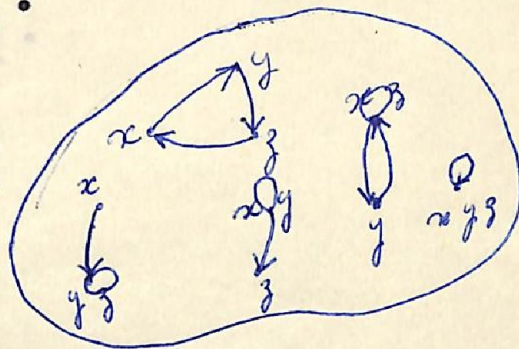
Relato da sessão de estudo realizada sob a coordenação da prof. Janice com as profs. Helenita, Agar e Léa, das 9 às 10 h.

Assunto : Propriedade das Relações.

1. Transitividade

$$\boxed{\forall x, y, z \in A, x R y \wedge y R z \Rightarrow x R z}$$

- 1) $x \neq y \neq z \neq x$
- 2) $x \neq y = z$
- 3) $x = y \neq z$
- 4) $z = x \neq y$
- 5) $x = y = z$



~~XXXXXXXXXXXXXXXXXXXX~~

$$(x, y) \in R \wedge (y, z) \in R \Rightarrow (x, z)$$

$$(y, z) \in R \wedge (z, y) \in R \Rightarrow (y, y)$$

2. ~~XXXXXXXX~~ Reflexividade

$$\boxed{\forall x \in A, x R x}$$

$$A = \{a, b, c\}$$

$$R_1 = \{(a, a), (b, b), (c, c), (a, b)\}$$

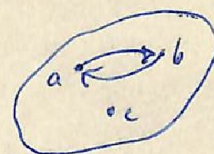
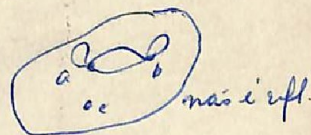
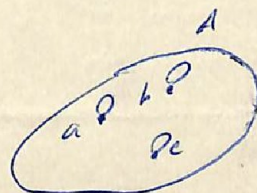
$$R_2 = \{(a, a), (a, b), (b, a), (b, b)\}$$

$$R_3 = \{(a, b), (b, a)\}$$

$$\forall x \in A, x \not R x \quad \text{anti-reflexiva}$$

$$\exists x \in A, x R x \quad \text{não é anti-reflexiva}$$

$$\exists x \in A, x \not R x \quad \text{não é reflexiva}$$



3. Simetria

$$\boxed{\forall x, y \in A, x R y \Rightarrow y R x}$$

$$\exists x, y \in A, x R y \Rightarrow y \not R x \quad \text{não é simétrica}$$

$$\forall x, y \in A, x R y \Rightarrow y \not R x \quad \text{é anti-simétrica}$$

$$\exists x, y \in A, x R y \Rightarrow y R x \quad \text{não é anti-simétrica}$$

$$\boxed{\forall x, y \in A, x R y \wedge y R x \iff x = y}$$