



# MUG2A3/ Matematika Diskret

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Pemodelan dan Simulasi



## Latihan Relasi



## LATIHAN RELASI (1/3)

- ▶ Relasi  $R$  atas himpunan  $A \times A$ . Jika  $A = \{0, 1, -1\}$ , dengan pasangan terurut  $R = \{(0, 0)\}$ . Apakah  $R$  termasuk relasi? Jelaskan! Apakah bersifat simetri dan sekaligus anti simetri? Jelaskan!
- ▶ Jika  $R_1 = \{(a, b), (a, c), (a, a), (c, d)\}$ ,  $R_2 = \{(a, b), (a, c), (a, d), (b, b), (d, d)\}$ , tentukan:

$$R_1 \circ R_2$$

$$R_1 \cap R_2$$

$$R_1 \cup R_2$$

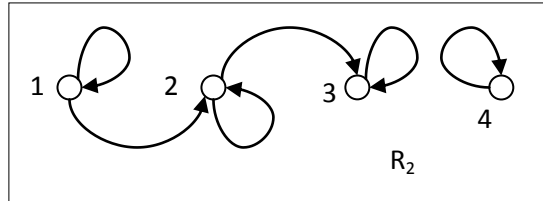
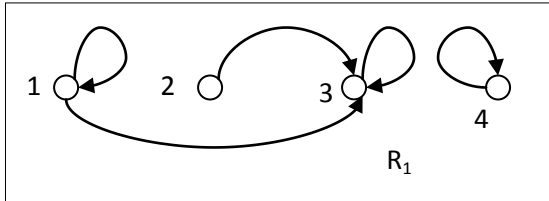
$$R_1 \oplus R_2$$

$$R_1^{-1} \circ R_2$$



## LATIHAN RELASI (2/3)

- Perhatikan graph di bawah ini. Dan tentukan:



- $R_1 \circ R_2$
- $R_1 \cap R_2$
- $R_1 \cup R_2$
- $R_1 \oplus R_2$
- $R_1^{-1} \circ R_2$

## Latihan Relasi (3/3)

▶ Jika  $R_1 = \{(-1, -1), (-1, 1)\}$ ,  $R_2 = \{(-1, -1), (1, -1), (1, 1)\}$ , tentukan:

–  $R_1 \circ R_2$

–  $R_1 \cap R_2$

–  $R_1 \cup R_2$

–  $R_1 \oplus R_2$

–  $R_1^{-1} \circ R_2$