On the notion of compensation between number and strength of attackers in ranking-based semantics

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Argument Strength Workshop@Bochum'16

AMANDE

Ranking-based argumentation systems

- An argumentation framework $\mathcal{F} = (\mathcal{A}, \mathcal{R})$
  - $\mathcal{A}$ is a set of arguments
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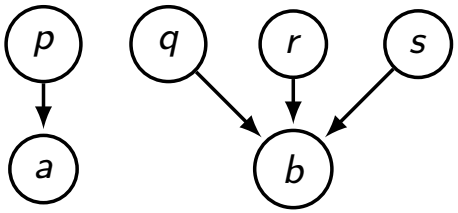
One minute crash course in ranking-based semantics



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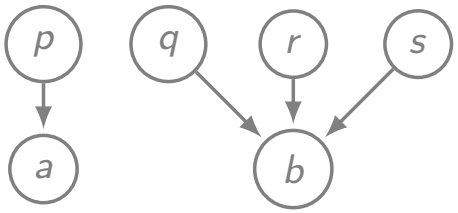

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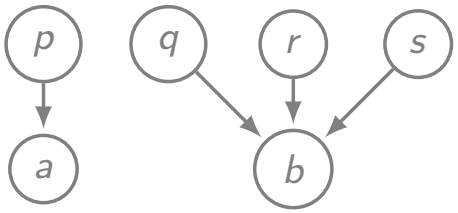

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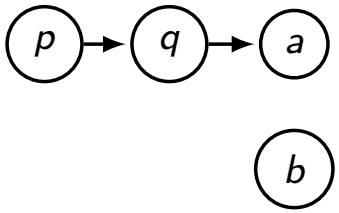

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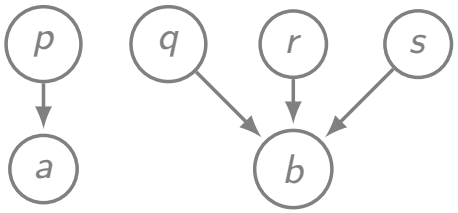

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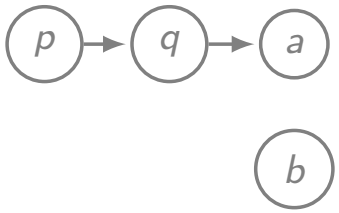

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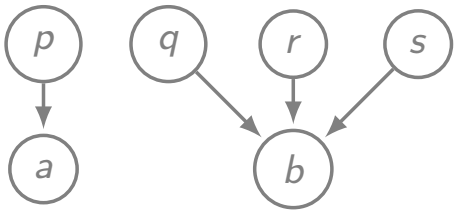

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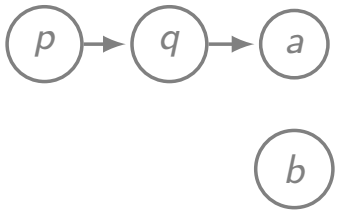

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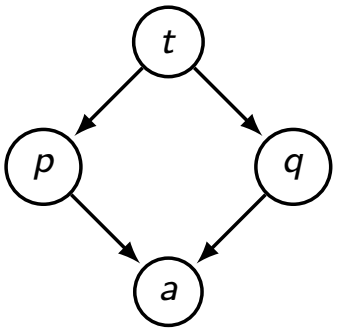

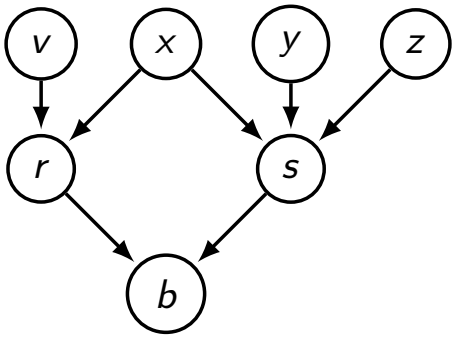

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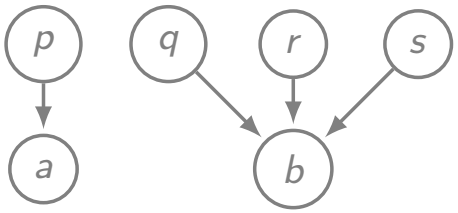

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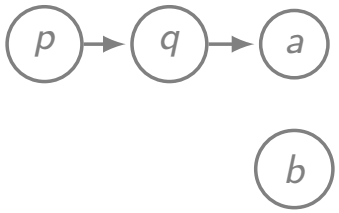

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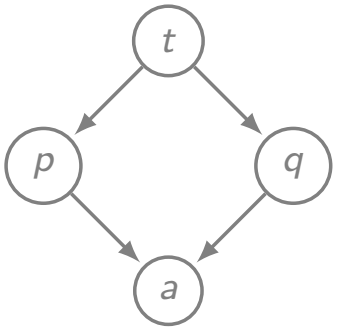

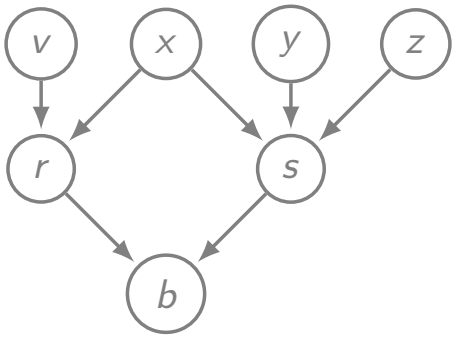

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Axioms for ranking-based semantics

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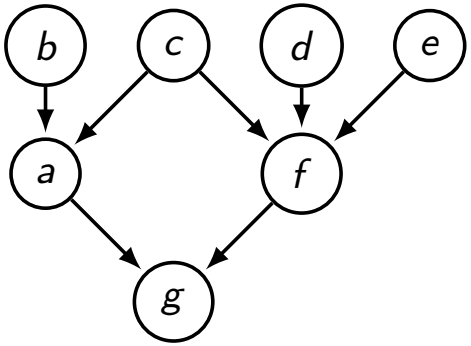
- Which properties should they satisfy?
- Define and study axioms for those semantics

Abstraction



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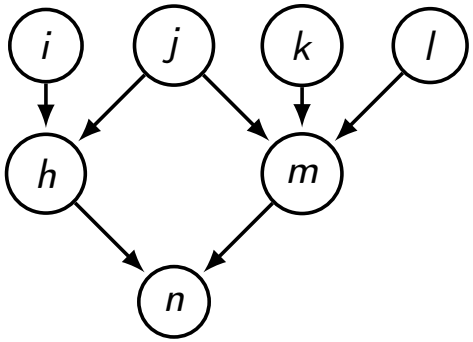

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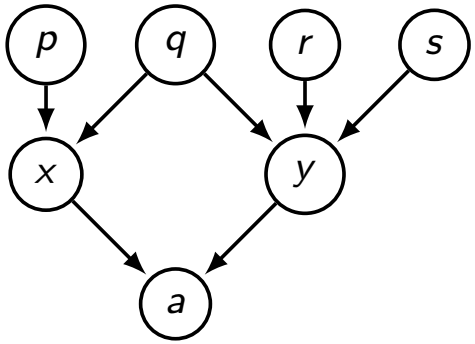
Independence



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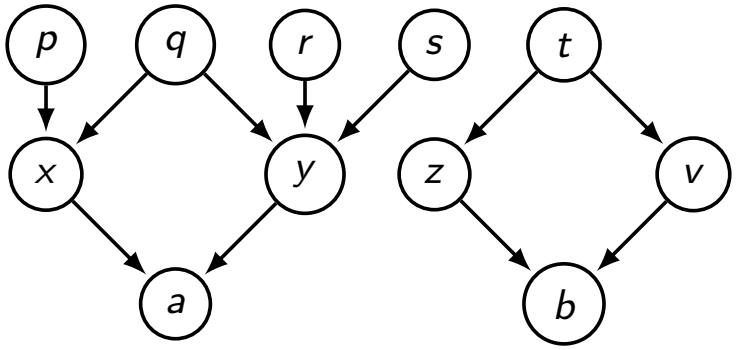
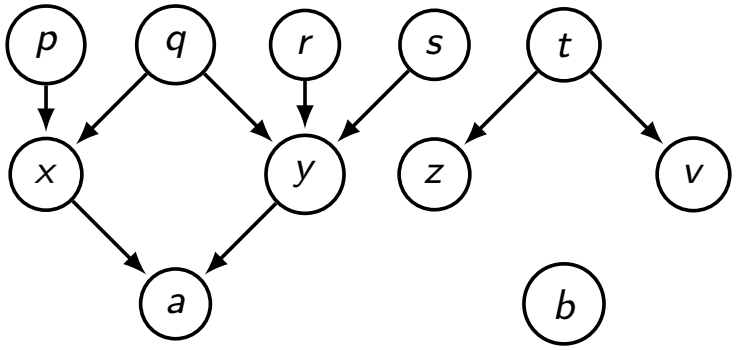
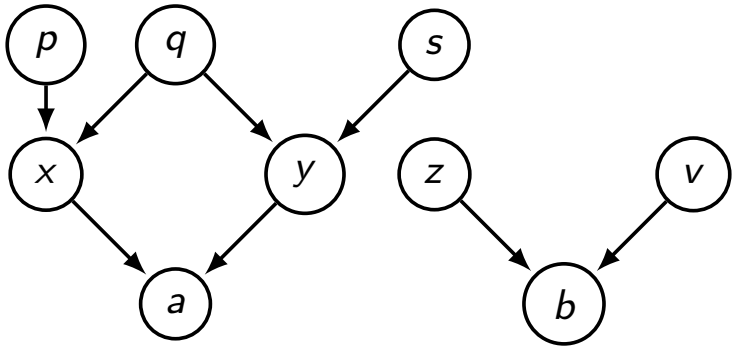


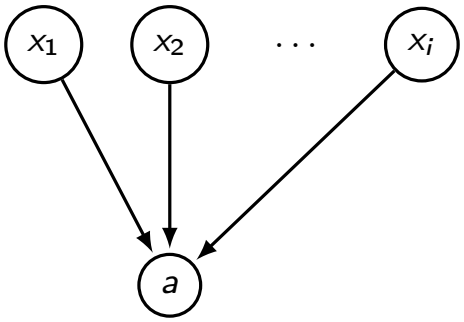
Void Precedence

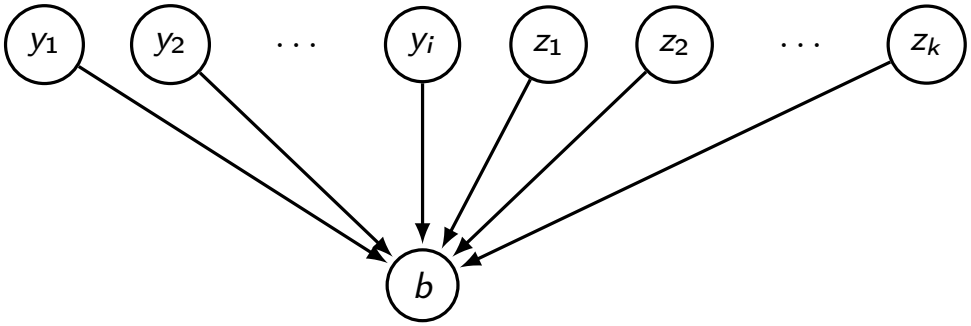


Defence Precedence



Group Comparison





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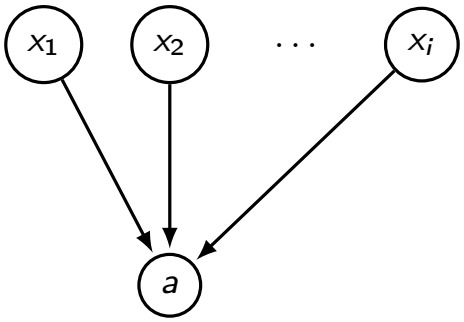

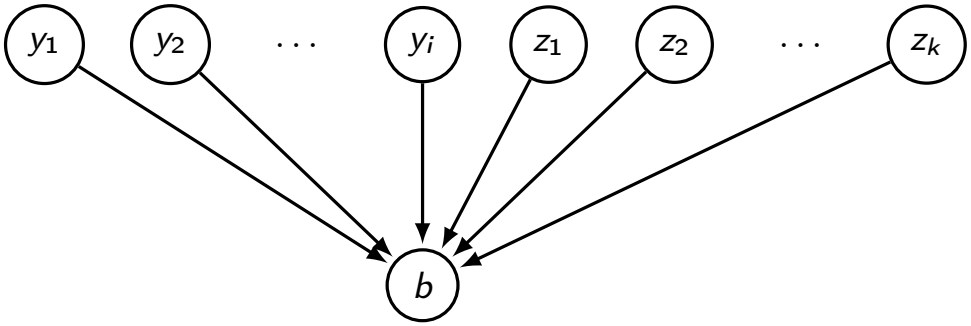

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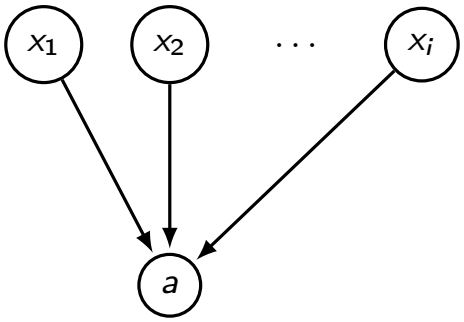

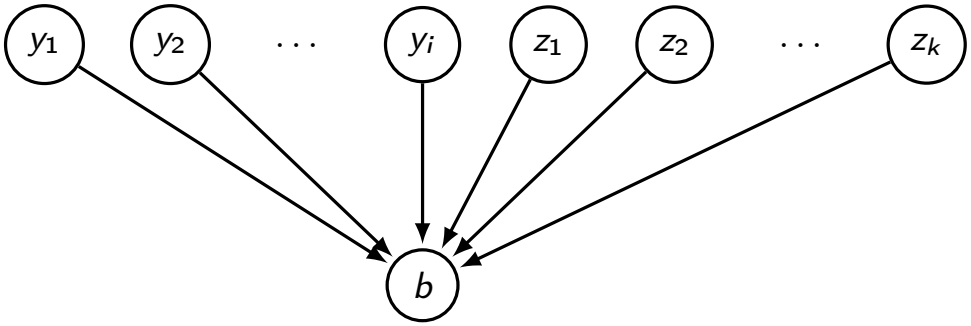

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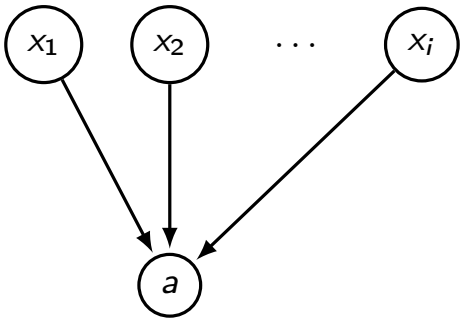

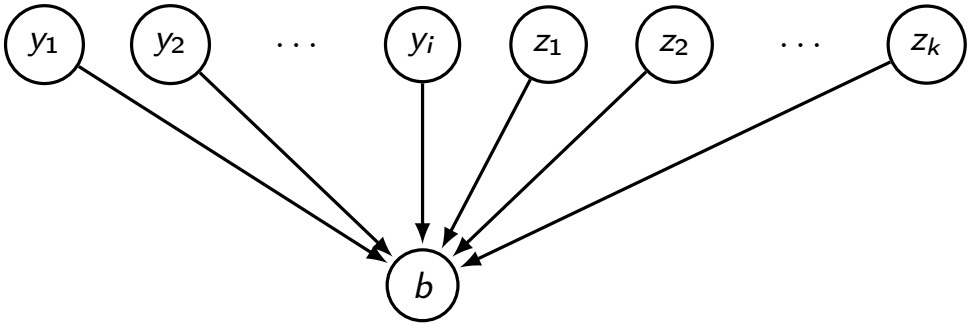

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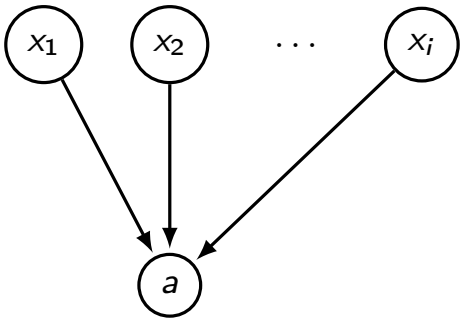

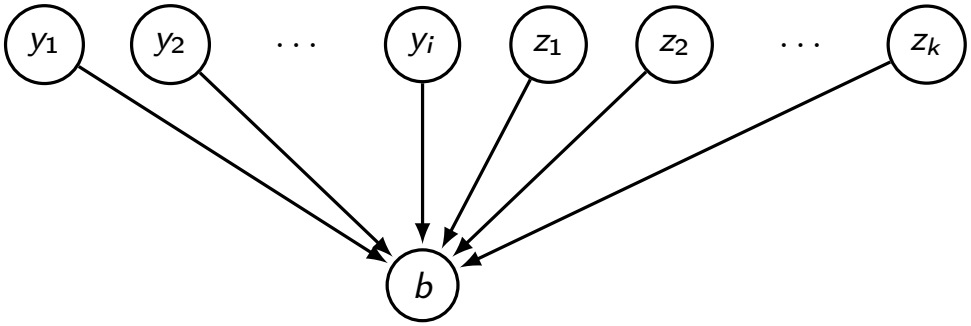

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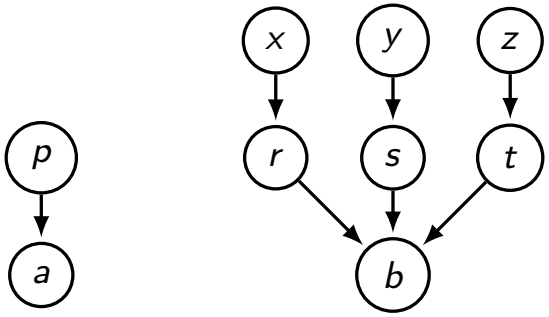

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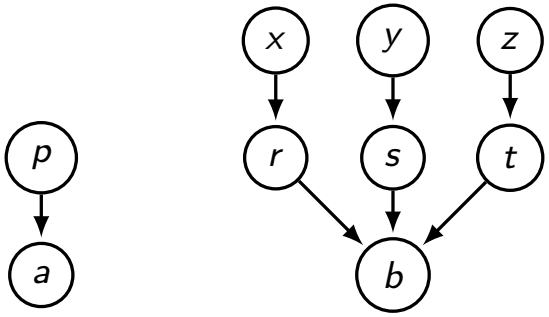

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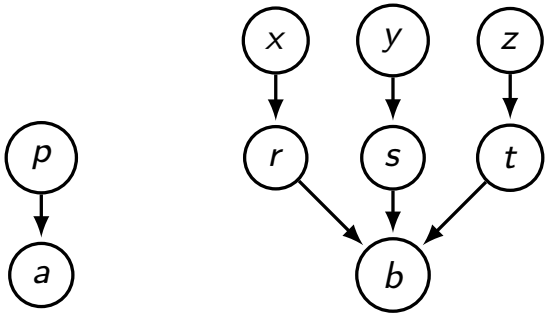
- Do we even want to decide?



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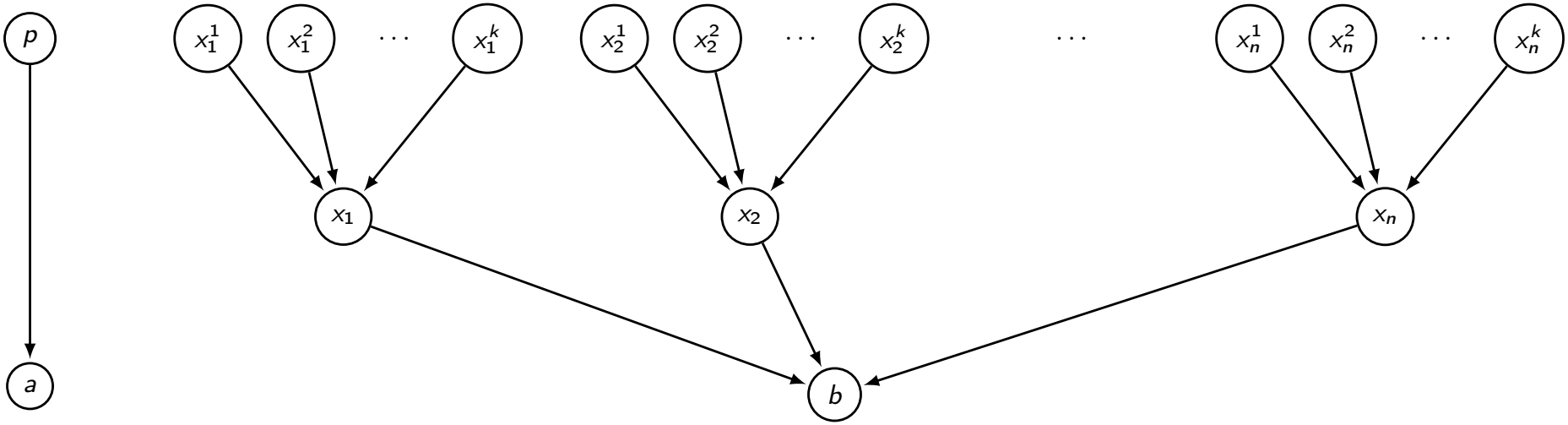

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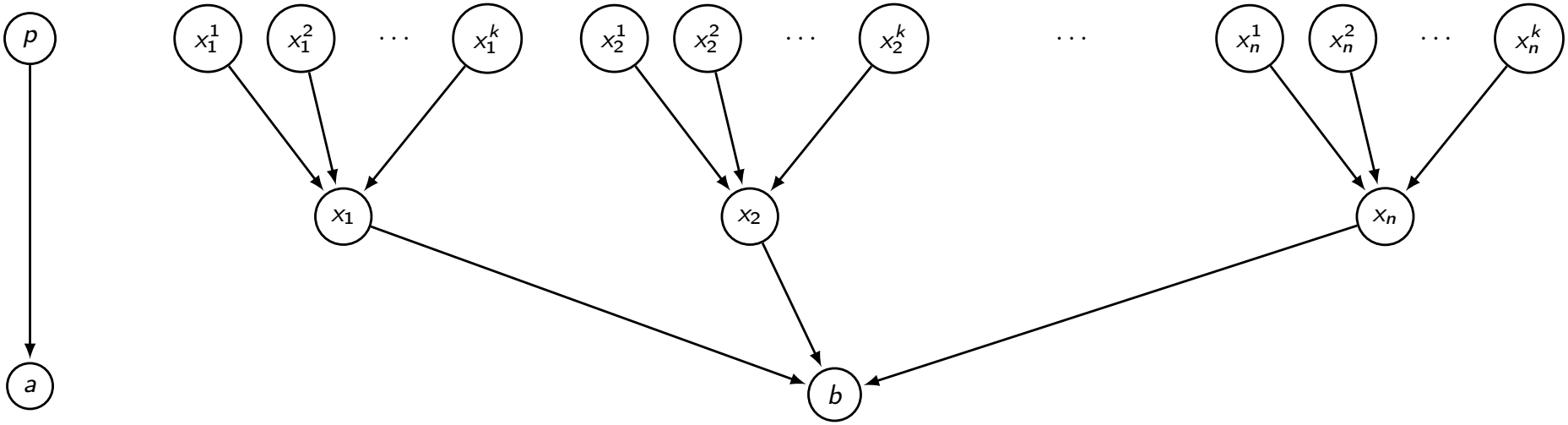

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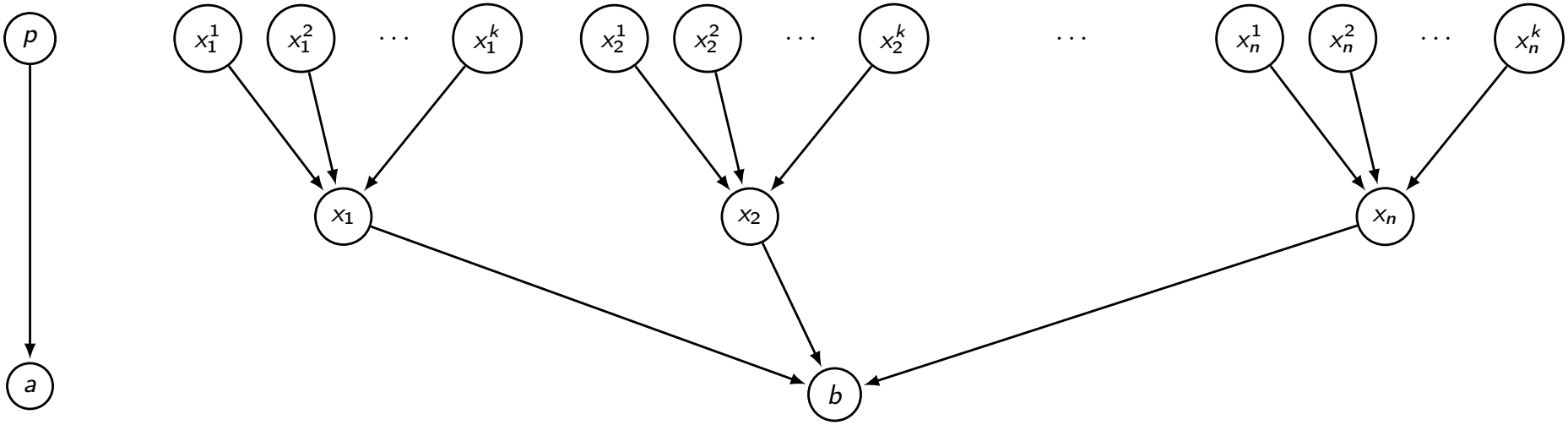

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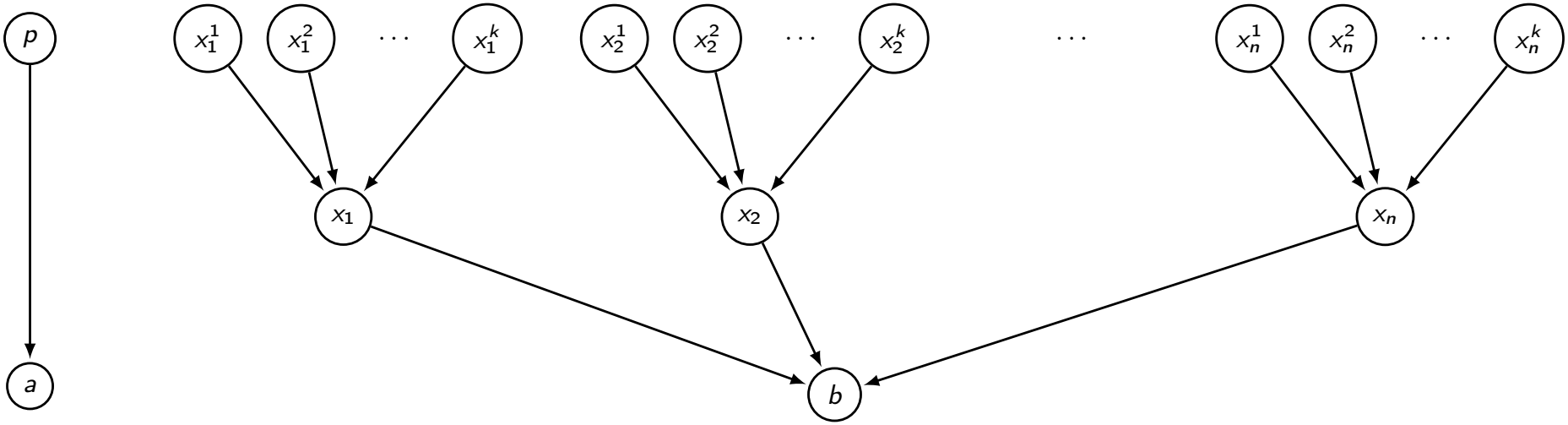
Compensation: a new axiom



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- This version of the axiom is applicable when x_i^j are not attacked
- A more general version? $\Rightarrow$ see me during the coffee break

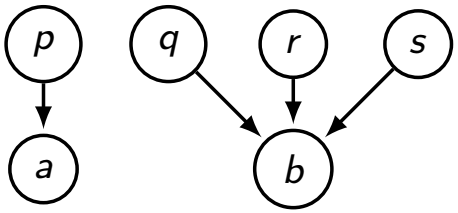
A new semantics: $\alpha-$BBS

Definition (s_α)

Let $\alpha \in (0, +\infty)$.We define $s_\alpha : \mathcal{A} \to [1, +\infty)$ such that $\forall a \in \mathcal{A}$,

$$s_\alpha(a) = 1 + \left(\sum_{b \in \mathtt{Att}(a)} \frac{1}{(s_\alpha(b))^\alpha} \right)^{1/\alpha}$$

How does our semantics work?



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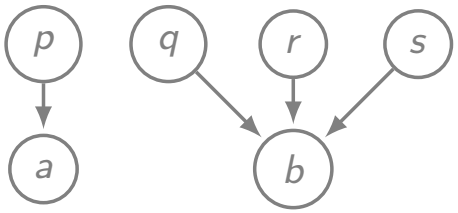

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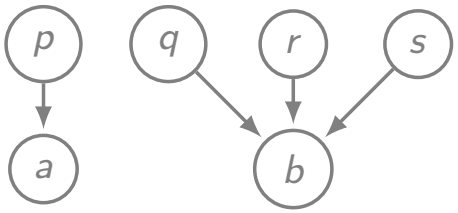

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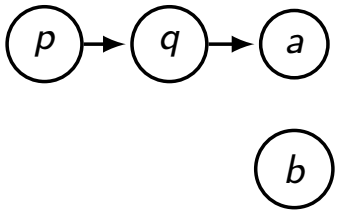

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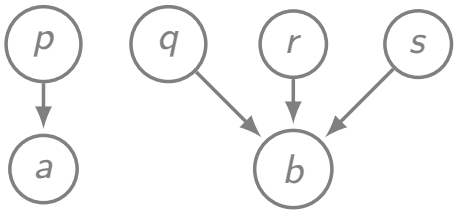

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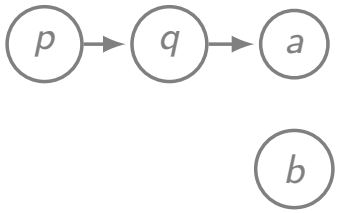

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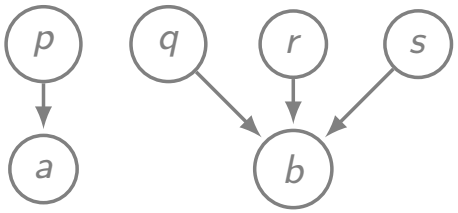

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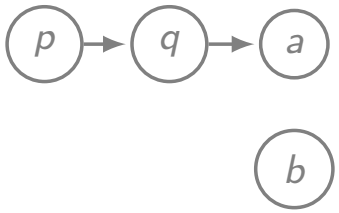

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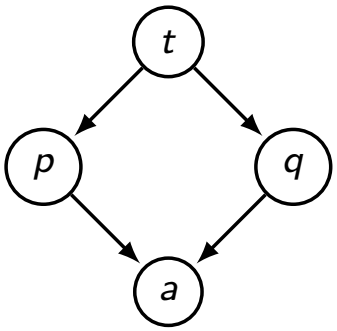

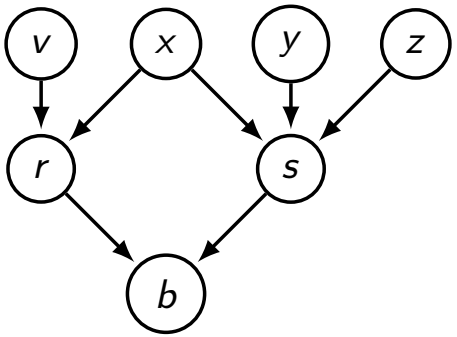

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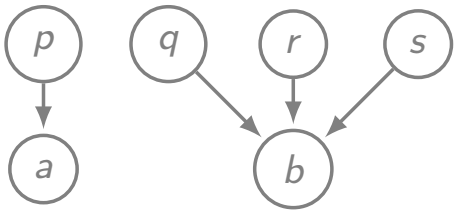

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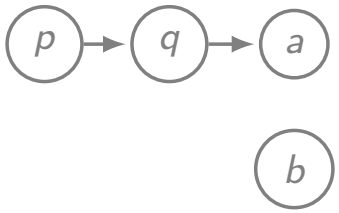

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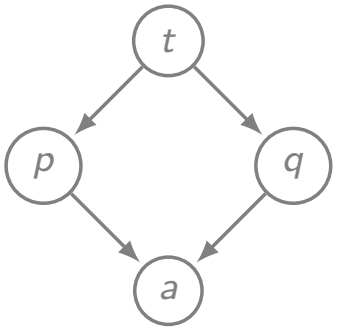

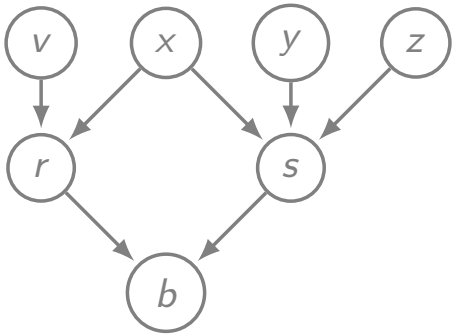

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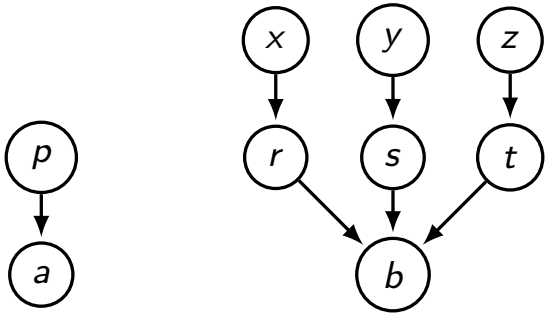

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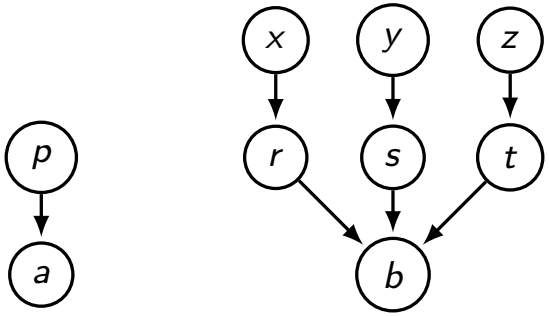

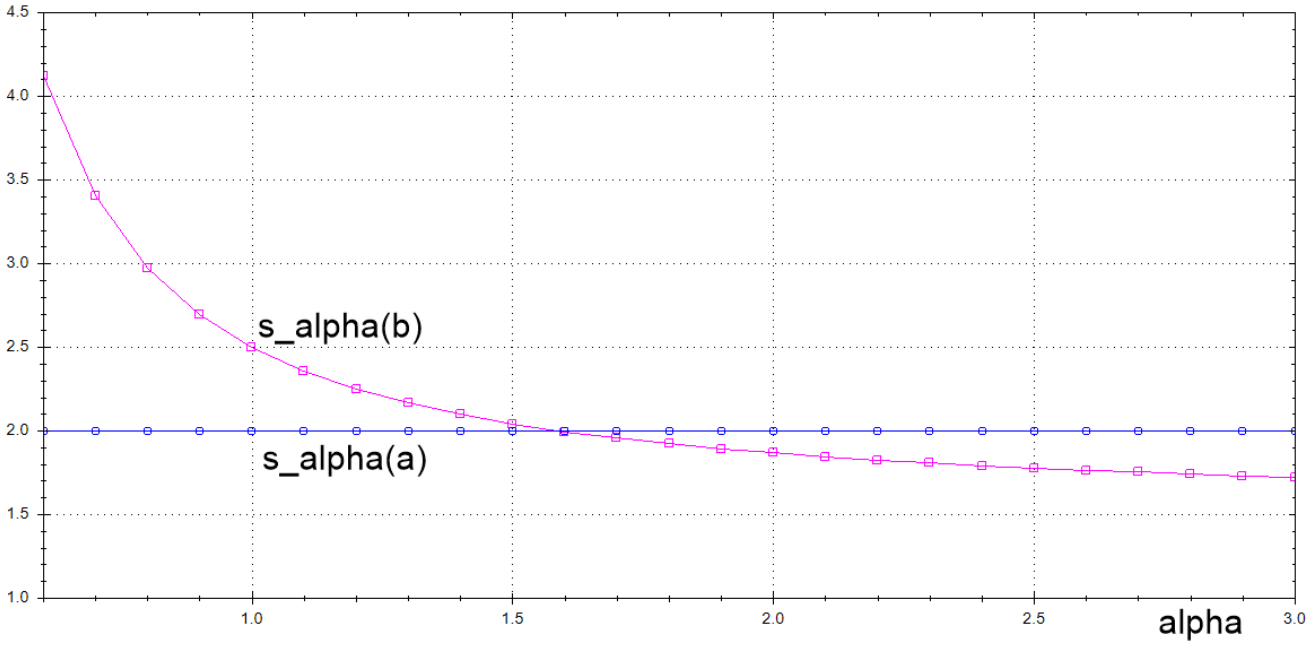

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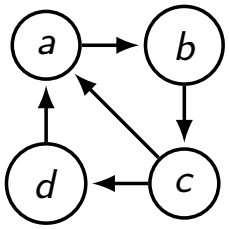

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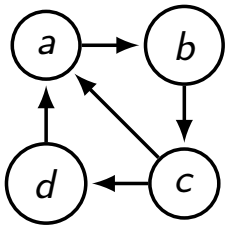

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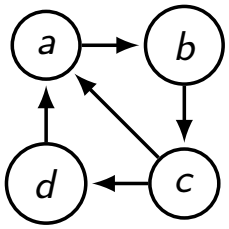

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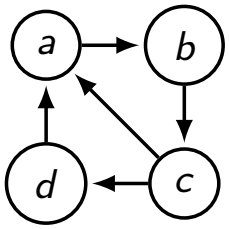

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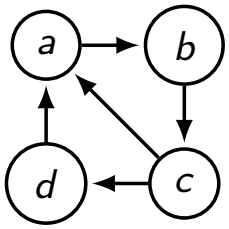

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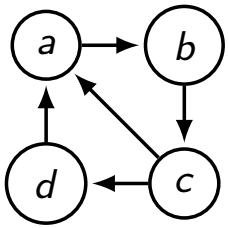

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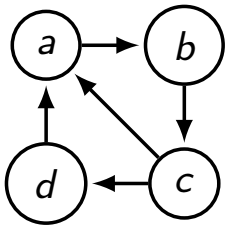

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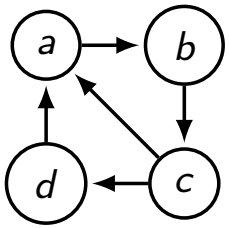

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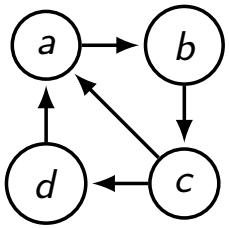

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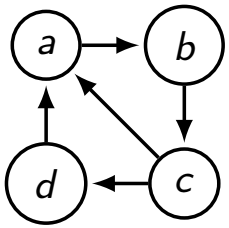

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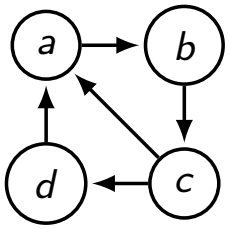

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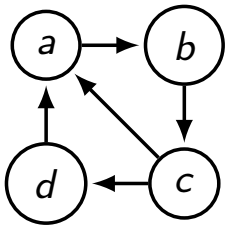

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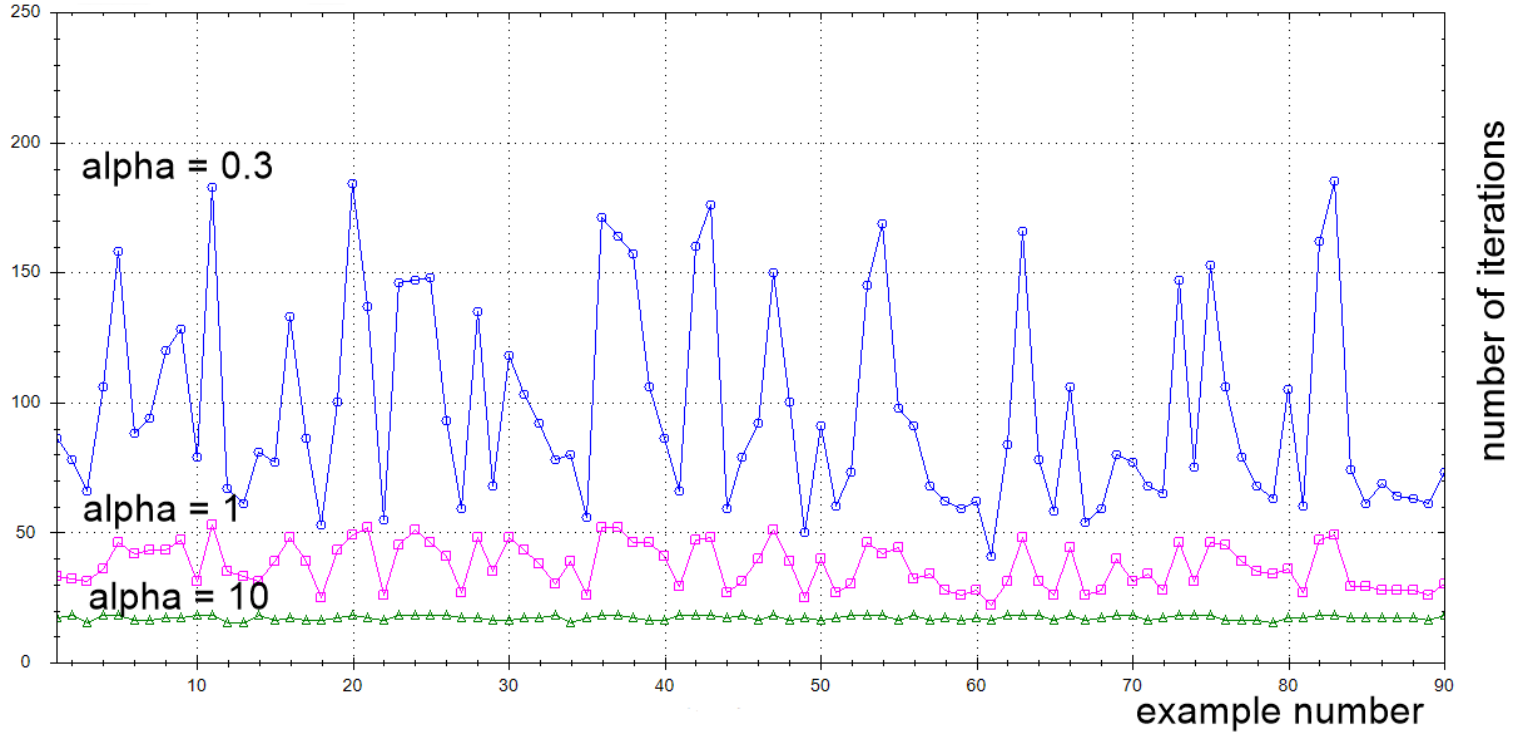

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Thank you