CFP: 5th International Conference on Hybrid Intelligent Systems (HIS'05)

November 06-09, 2005

Rio de Janeiro, Brazil

Conference URL: http://his05.hybridsystem.com

Mirror Site: http://www.ica.ele.puc-rio.br/his05

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Deadline for Paper Submission: July 1st, 2005

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HIS'05 is technically co-sponsored by:

- IEEE Systems Man and Cybernetics Society

- International Fuzzy Systems Association (IFSA)

- European Neural Network Society (ENNS)

- European Society for Fuzzy

Logic and Technology (EUSFLAT)

- The World Federation on Soft Computing

- Brazilian Computing Society (SBC)

- Brazilian Society for Automation (SBA)

HIS'05 is organized in cooperation with:

- IEEE- Computational Intelligence Society

Hybridization of intelligent systems is a promising research field of computational intelligence focusing on

synergistic combinations of multiple approaches to develop the next generation of intelligent systems. A fundamental stimulus to the

investigations of Hybrid Intelligent Systems (HIS) is the awareness that combined approaches

will be necessary if the remaining tough problems in artificial intelligence are to be solved. Neural computing, machine learning, fuzzy logic,

evolutionary algorithms, agent-based methods, among others, have been established and shown their strength and drawbacks.

Recently, hybrid intelligent systems are getting popular due to their capabilities in

handling several real world complexities involving imprecision, uncertainty and vagueness.

HIS'05 builds on the success of

previous HIS events: HIS'04 was held in Kita kyushu, Japan, HIS'03 in Melbourne, Australia, HIS'02 in Santiago,

Chile, and HIS'01, the first event, in

Adelaide, Australia. All events attracted participants from

over 30 countries. HIS'05 is, therefore, the fifth International Conference that brings together researchers, developers,

practitioners, and users of soft computing, computational intelligence, multi-agents, and several other intelligent

computing techniques.

The objectives of this

international meeting are to increase the awareness of the research community of the broad spectrum of

hybrid techniques, to bring together AI researchers from around the world to present their cutting-edge

results, to discuss the current trends in HIS research, to develop a collective vision of future opportunities, to

establish international collaborative opportunities, and as a result to advance the state of the art of the field.

HIS'05 invites

authors to submit original and unpublished work that demonstrates current

research in hybrid intelligent systems research and their applications in

science, technology, business and commerce. Submitted papers have to be original,

containing new and original results. The assessment

criteria will be heavily weighted towards originality, potential impact and

relevance to HIS'05 themes. All papers will be peer reviewed by three independent

referees of the international program committee of HIS'05.

HIS'05 will focus on the following topics:

** Theoretical

Advances in Hybrid Intelligent System Architectures

* Interactions between neural networks and fuzzy inference

systems

* Hybrid learning

techniques (supervised/ unsupervised/reinforcement learning)

* Artificial neural network optimization

using global optimization techniques

* Fuzzy inference system optimization using global

optimization algorithms

* Hybrid systems involving support vector

machines, rough sets, Bayesian networks, probabilistic

reasoning, minimum message length, etc.

* Hybrid computing

using neural networks - fuzzy systems -

evolutionary algorithms

* Hybrid optimization techniques

(evolutionary algorithms, simulated annealing,

tabu search, GRASP etc.)

* Hybrid of soft computing

and statistical learning techniques

* Integration with Intelligent

agents (architectures, environments,

adaptation /learning and knowledg e

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* Hybrid models using inductive logic

programming, logic synthesis, grammatical

inference, case-based reasoning etc.

** Hybrid Approaches and Applicatio

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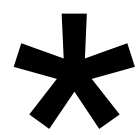

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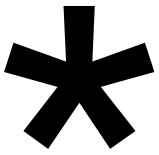

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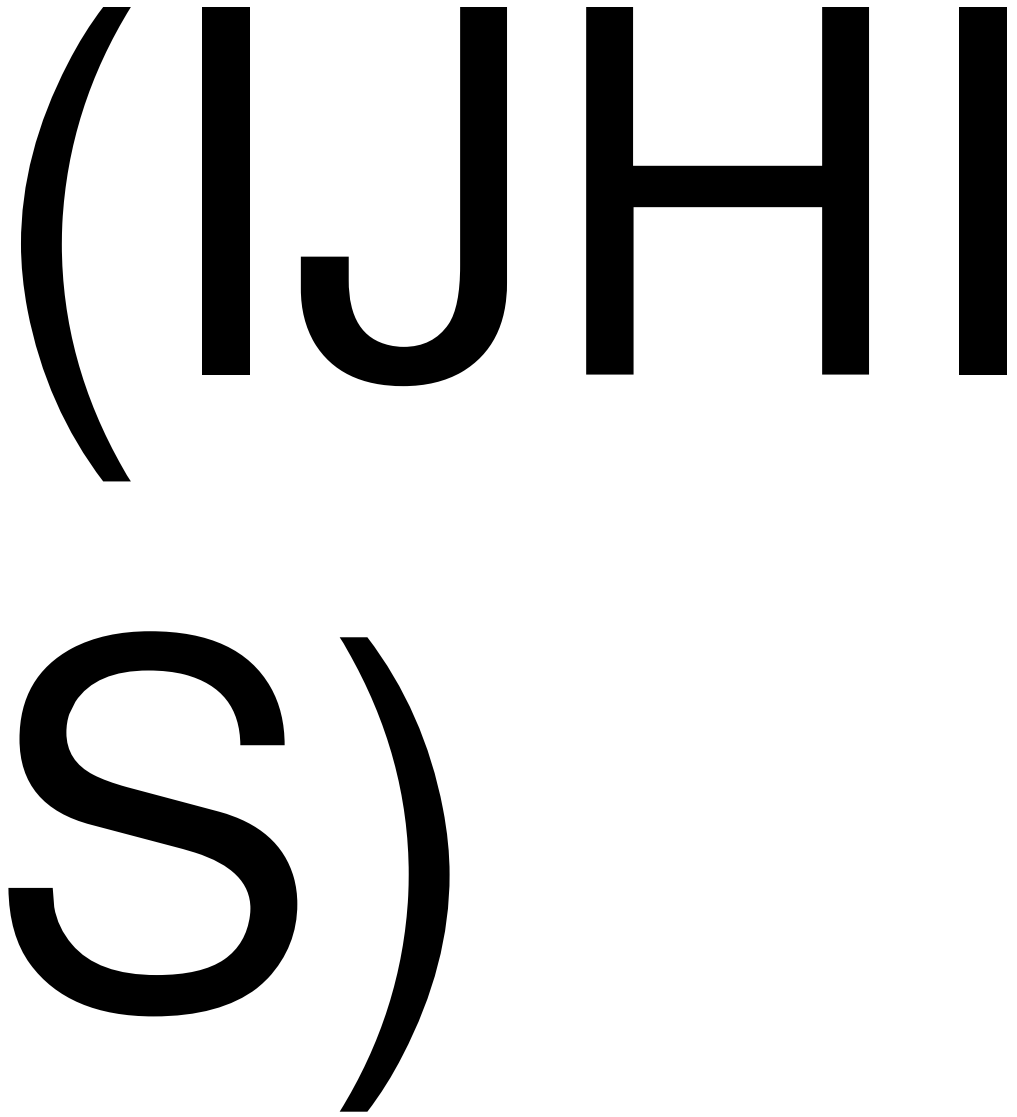
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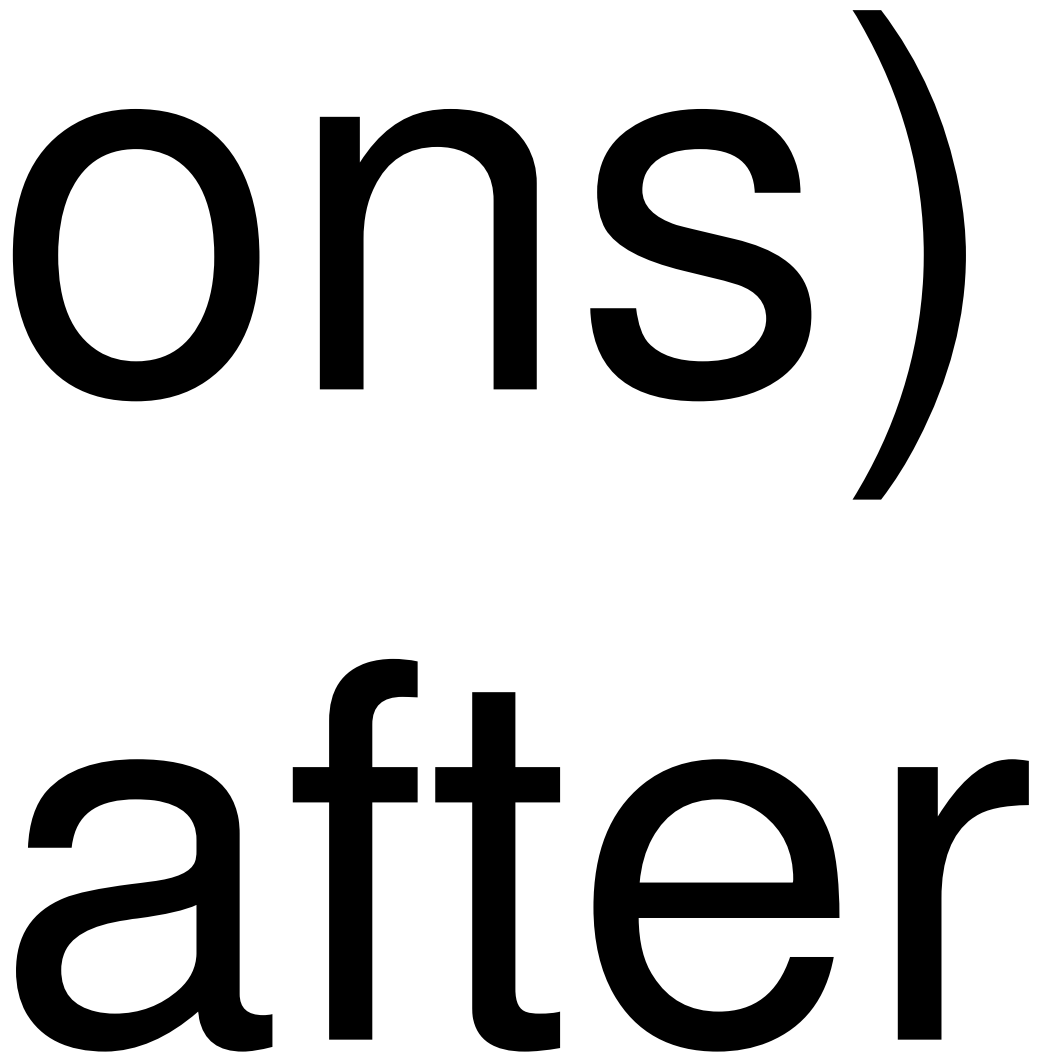
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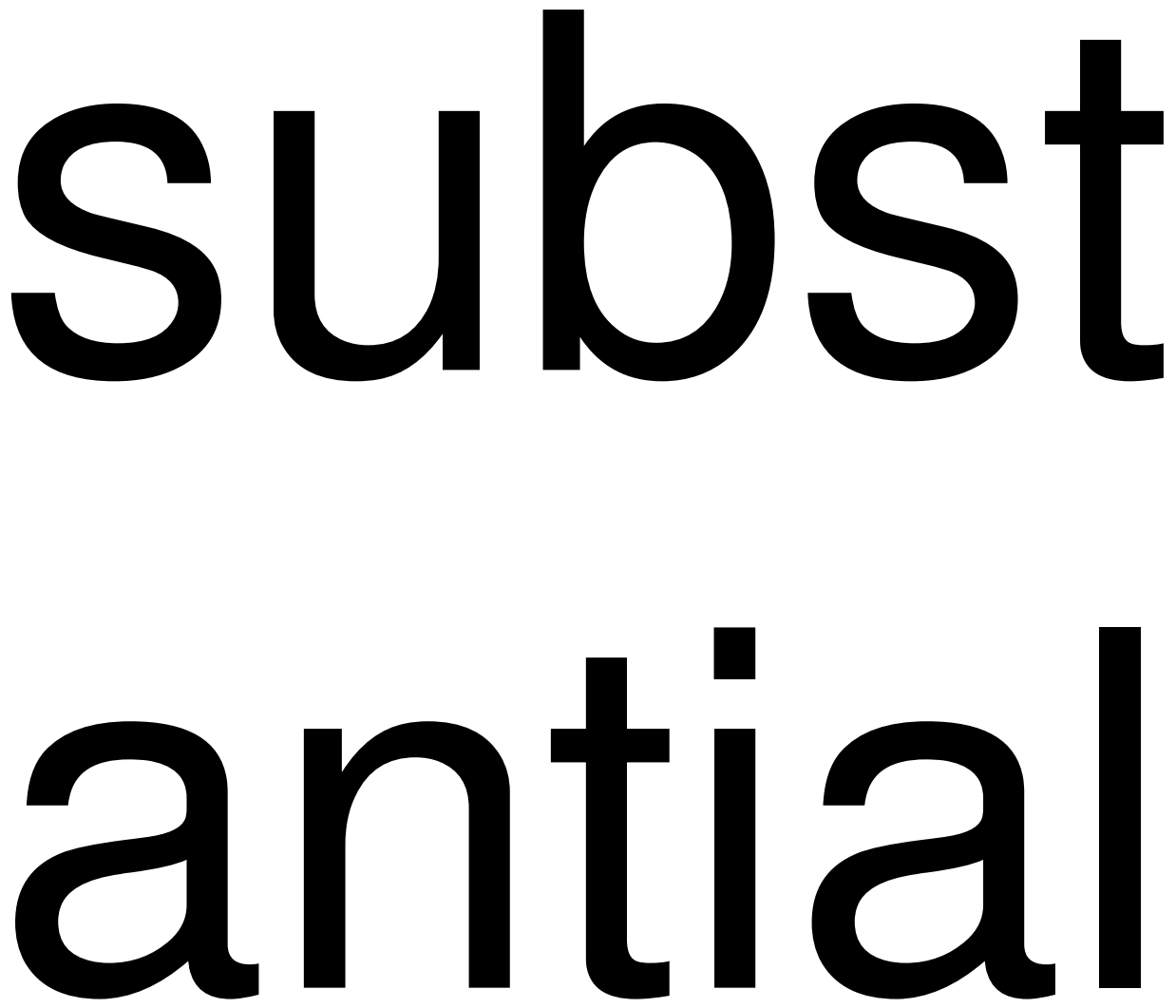
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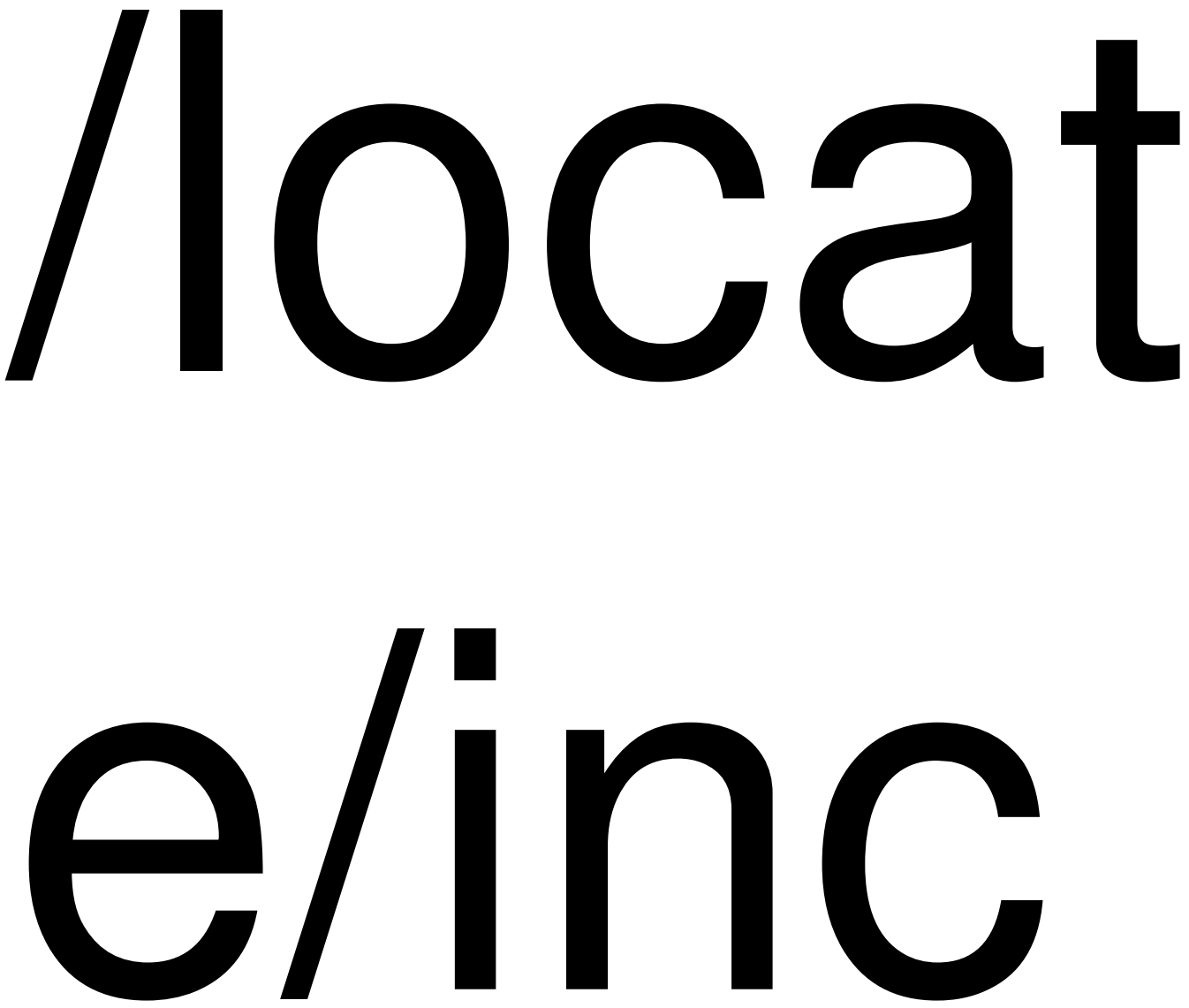
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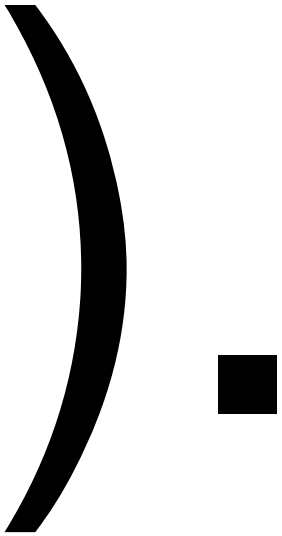

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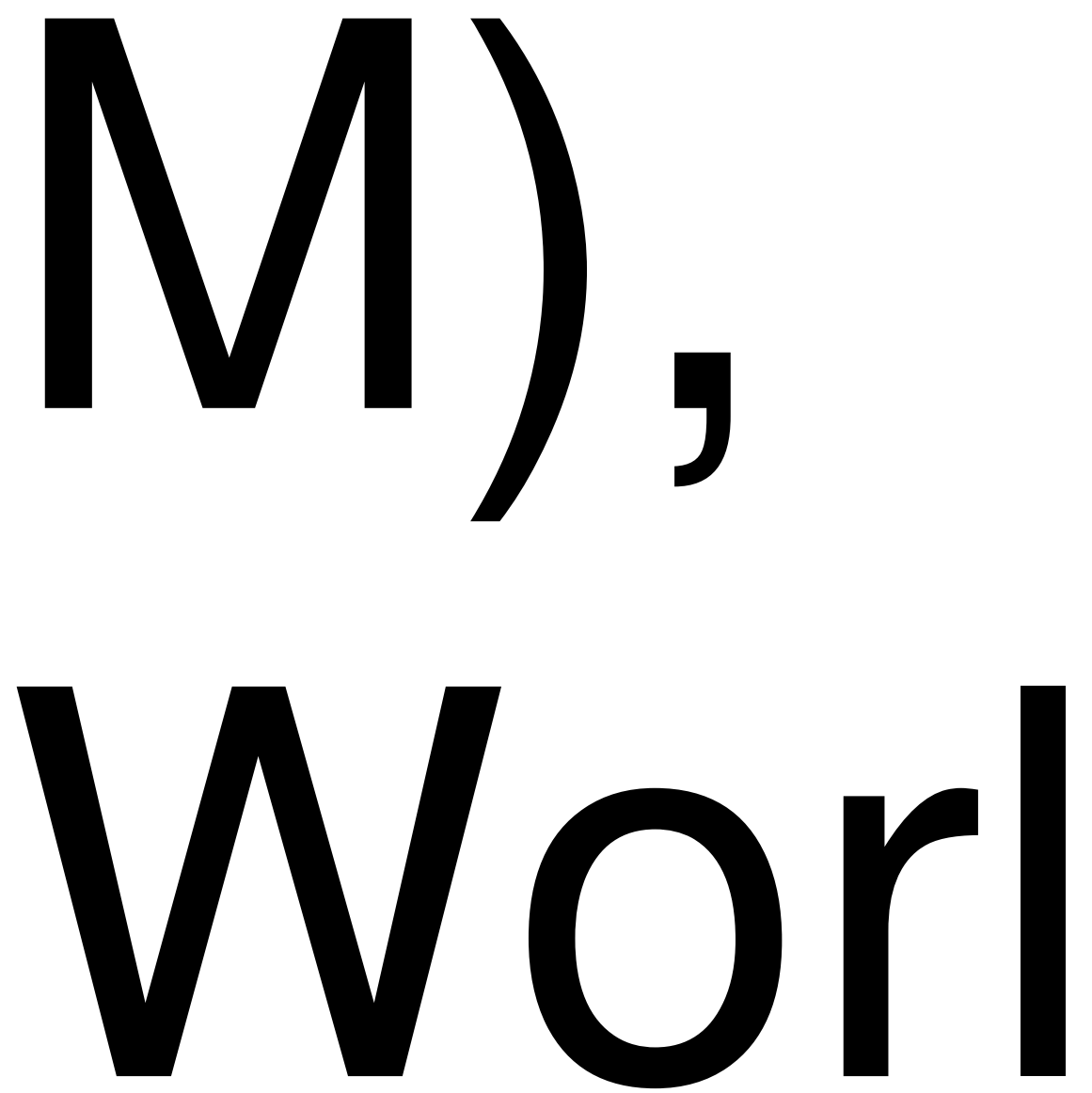

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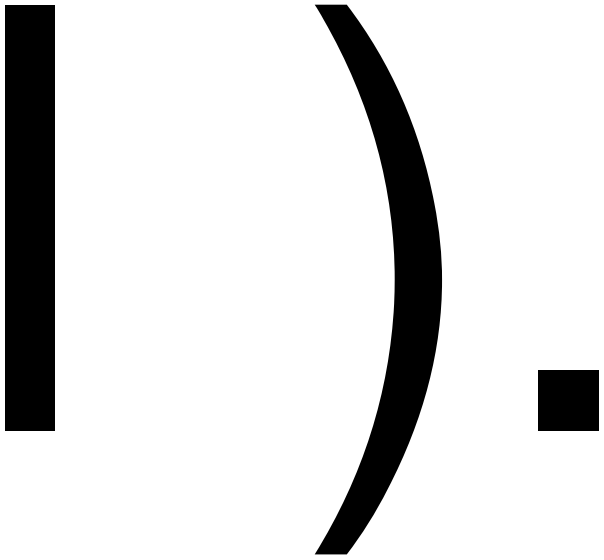

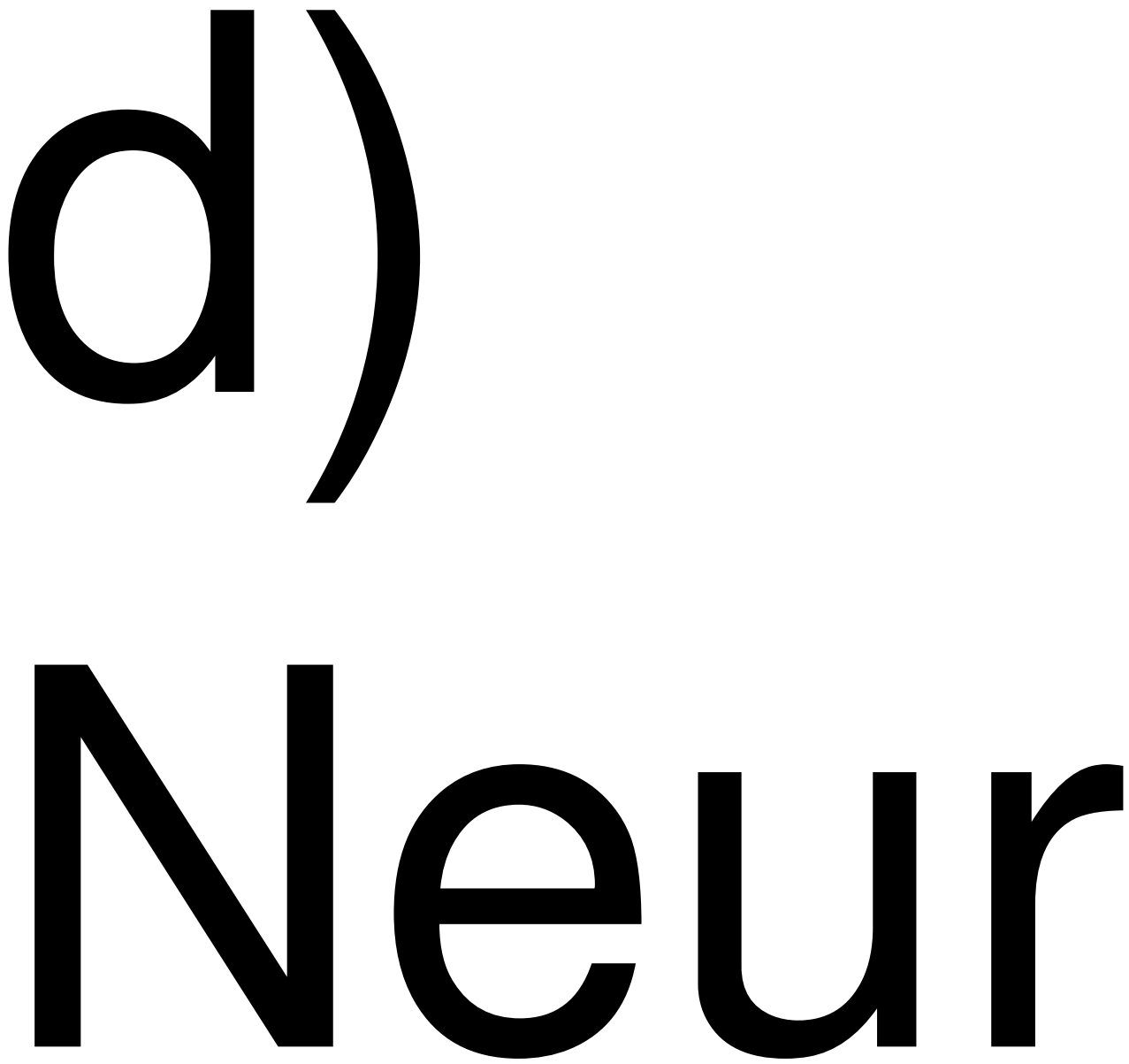
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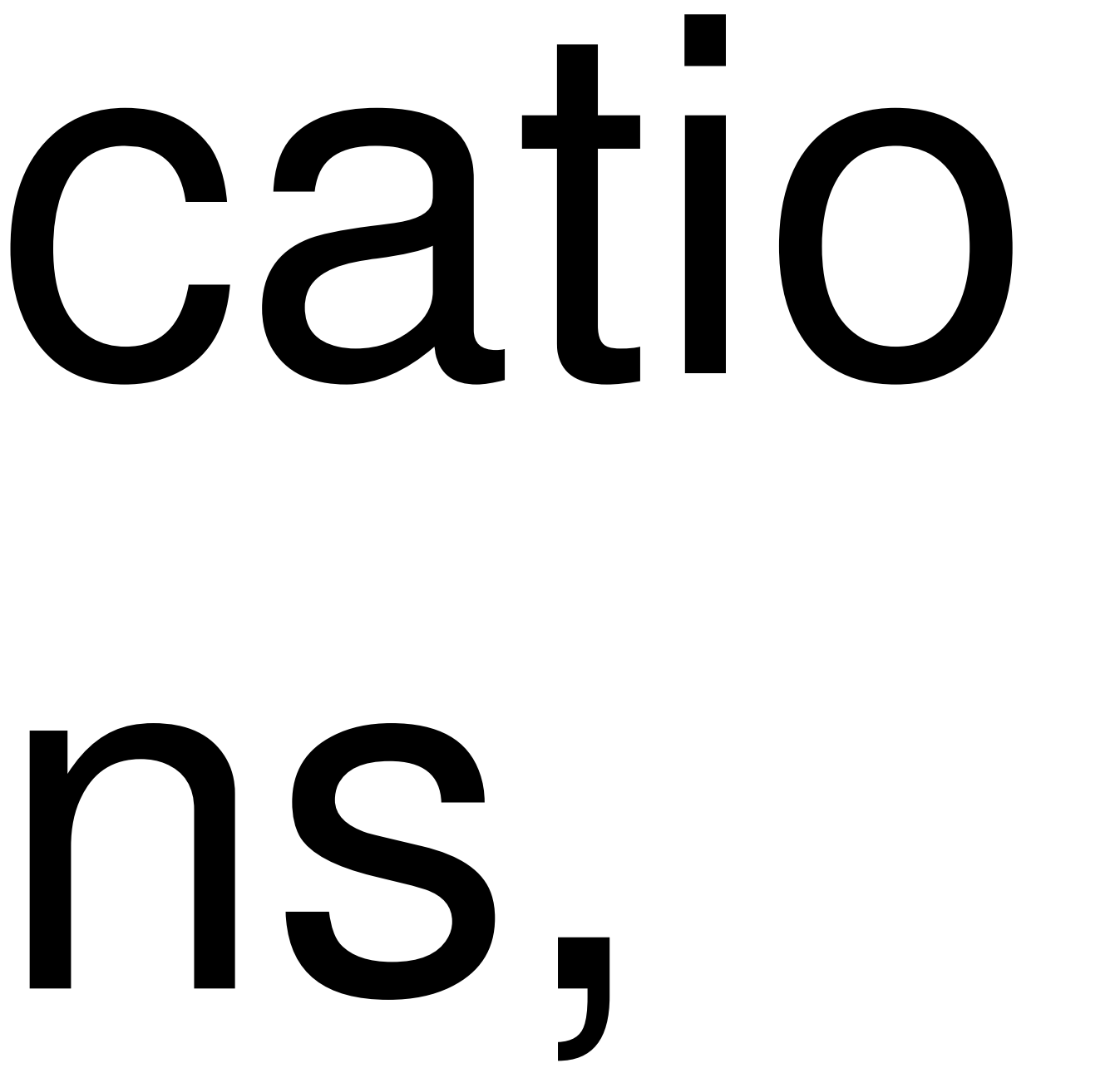
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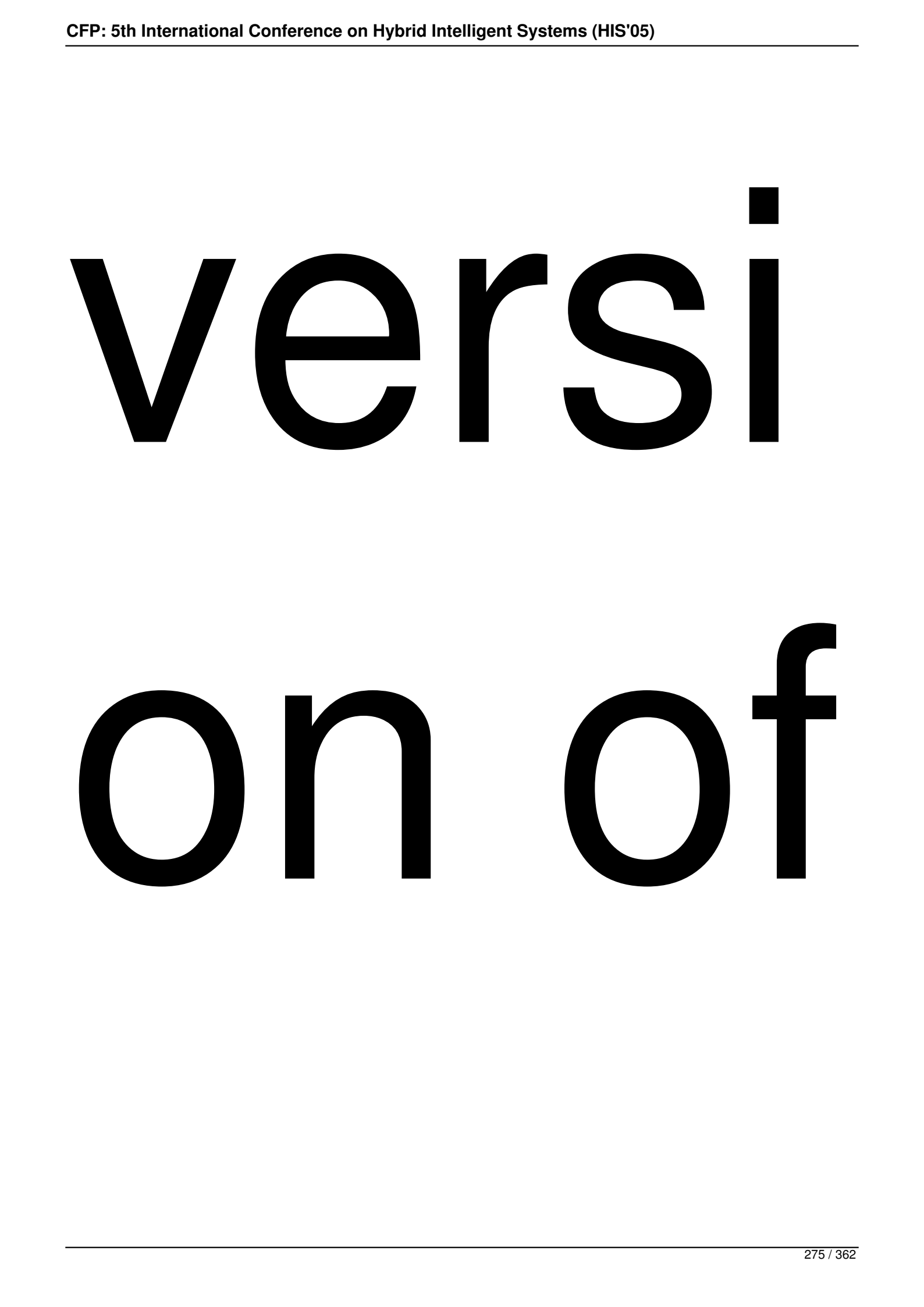
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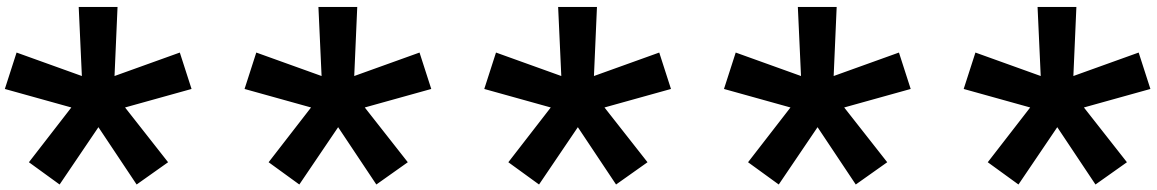

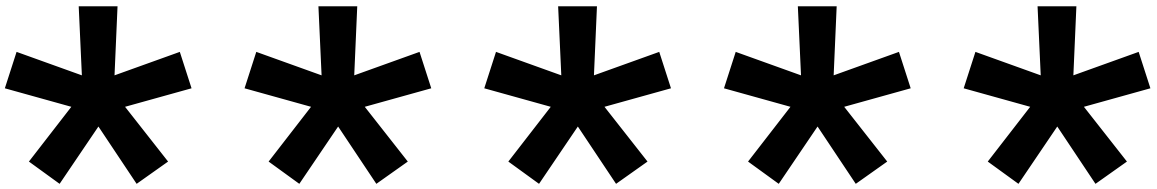

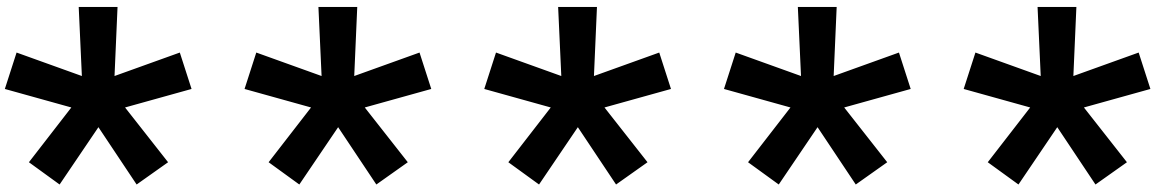

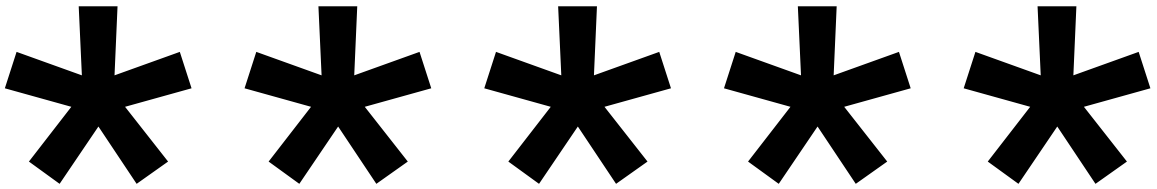

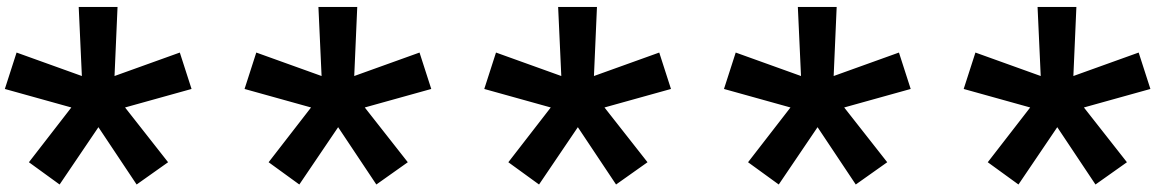

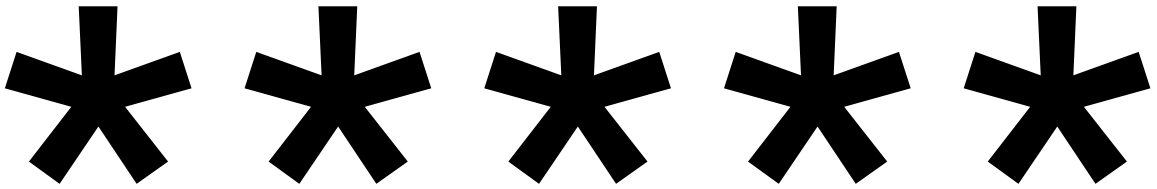

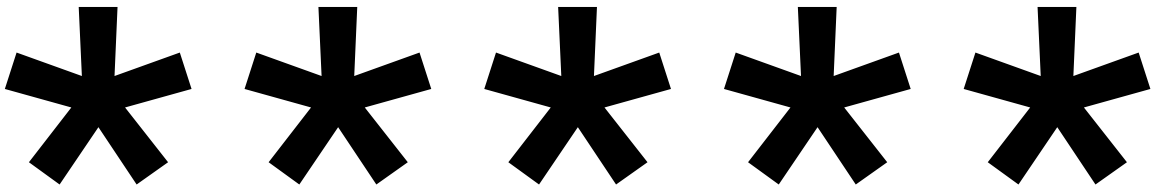

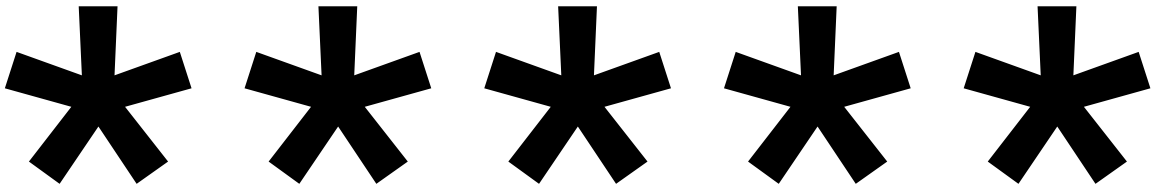

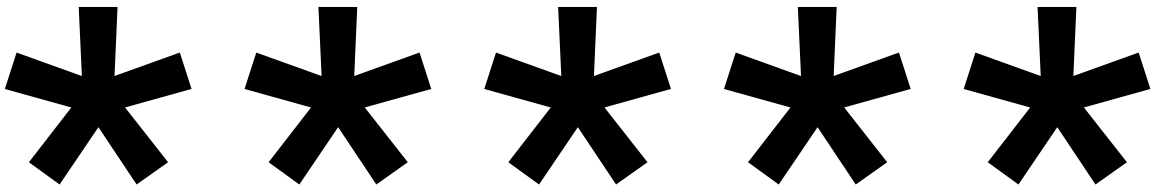

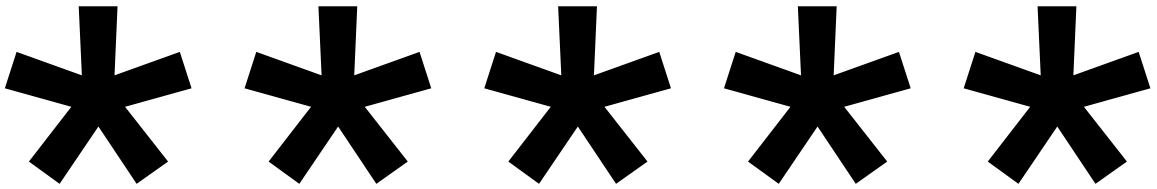

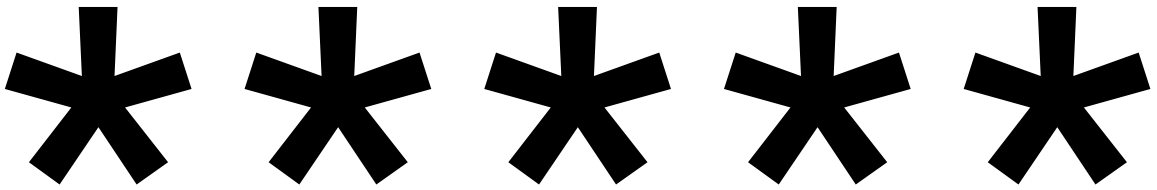

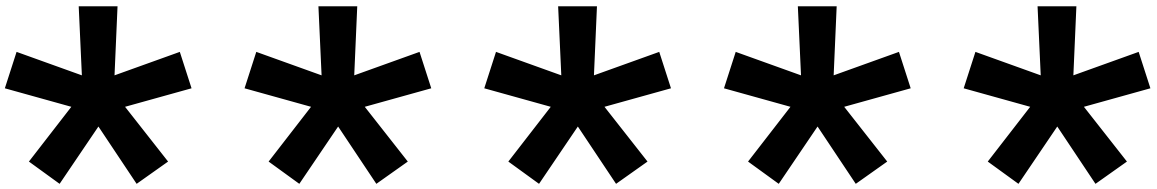

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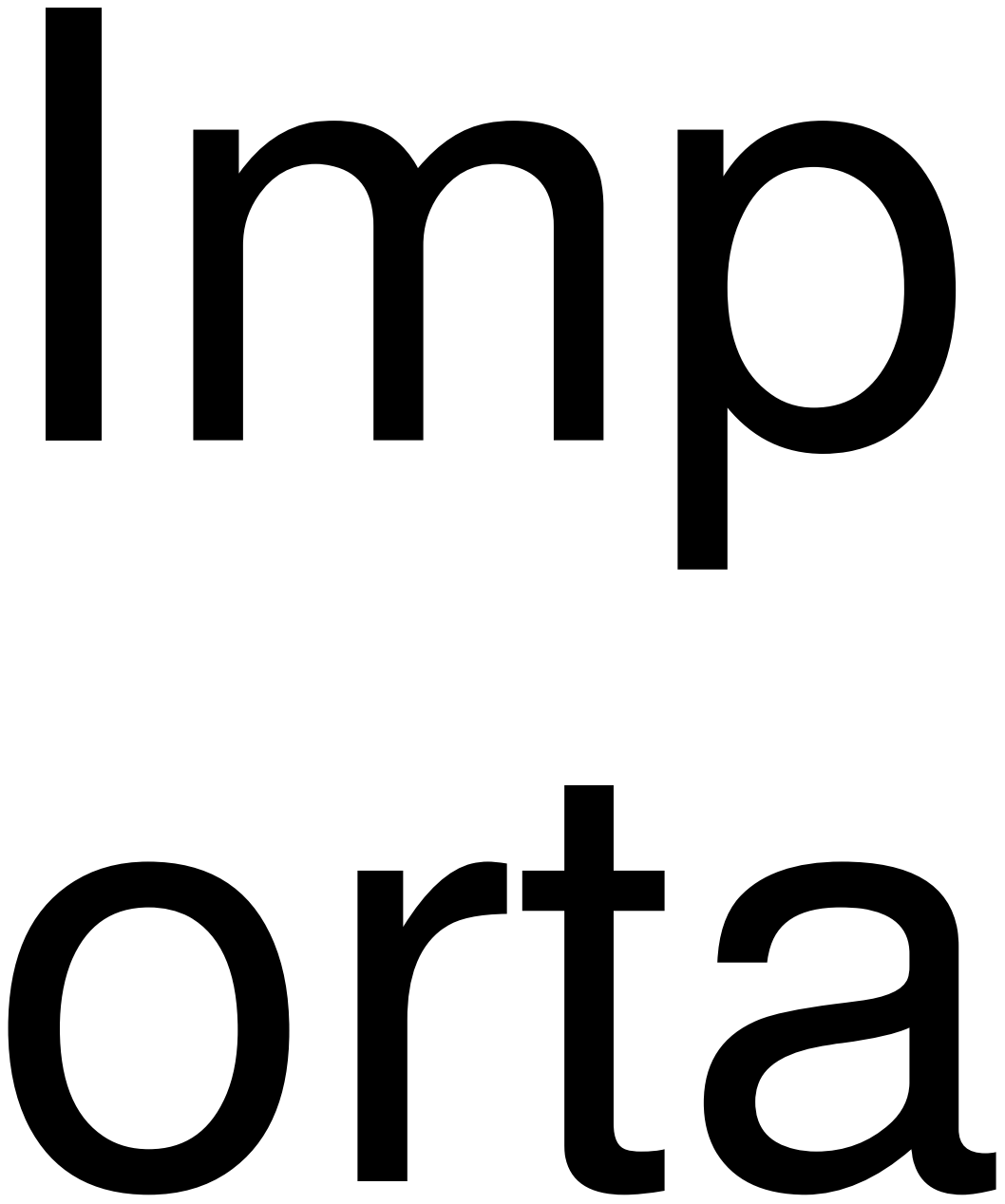
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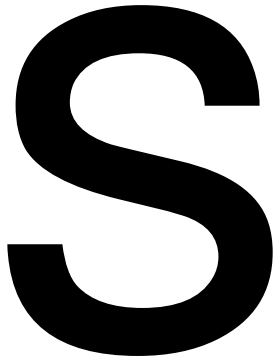

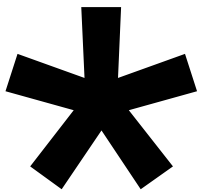

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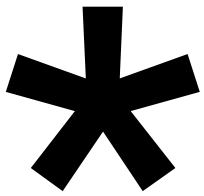

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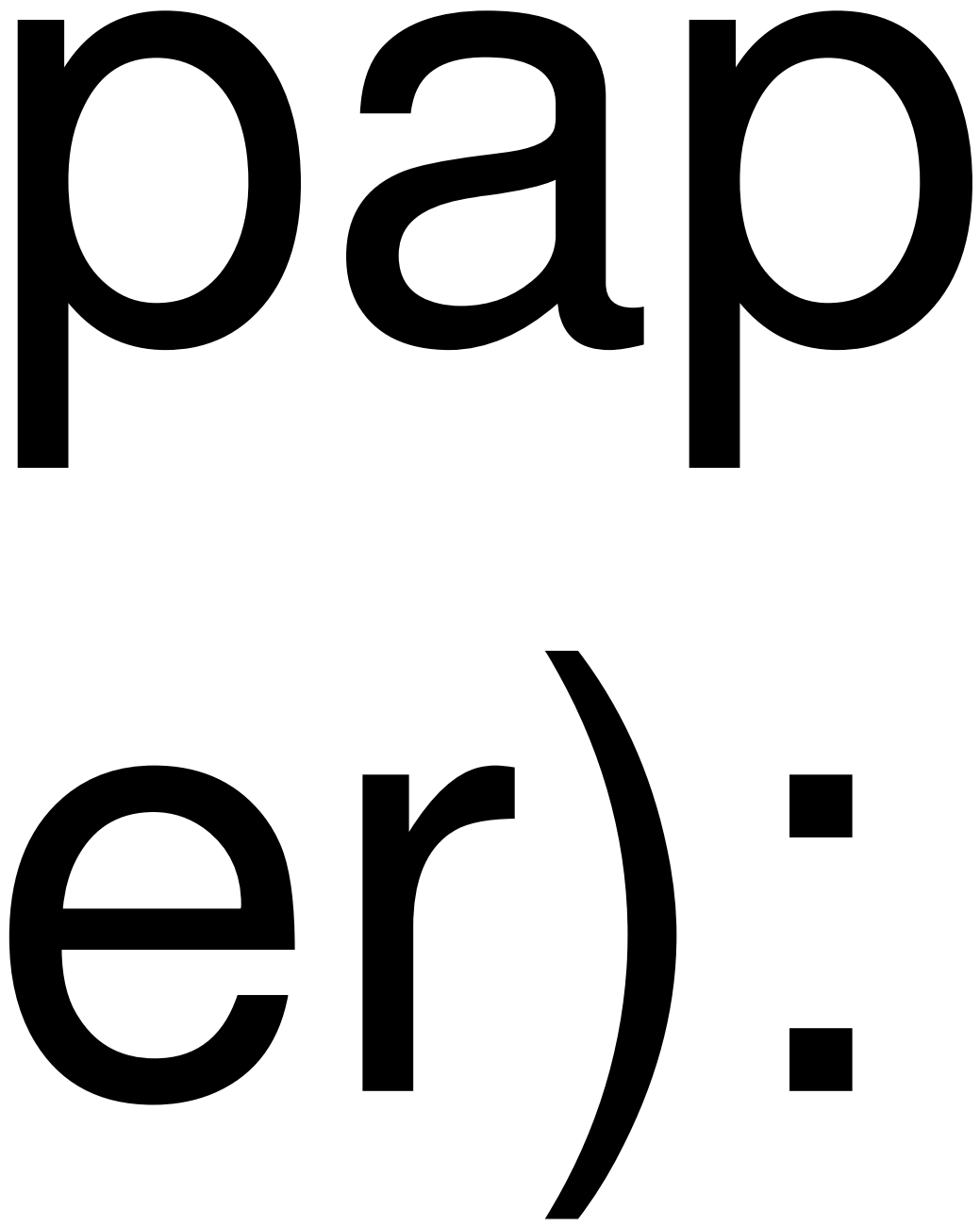

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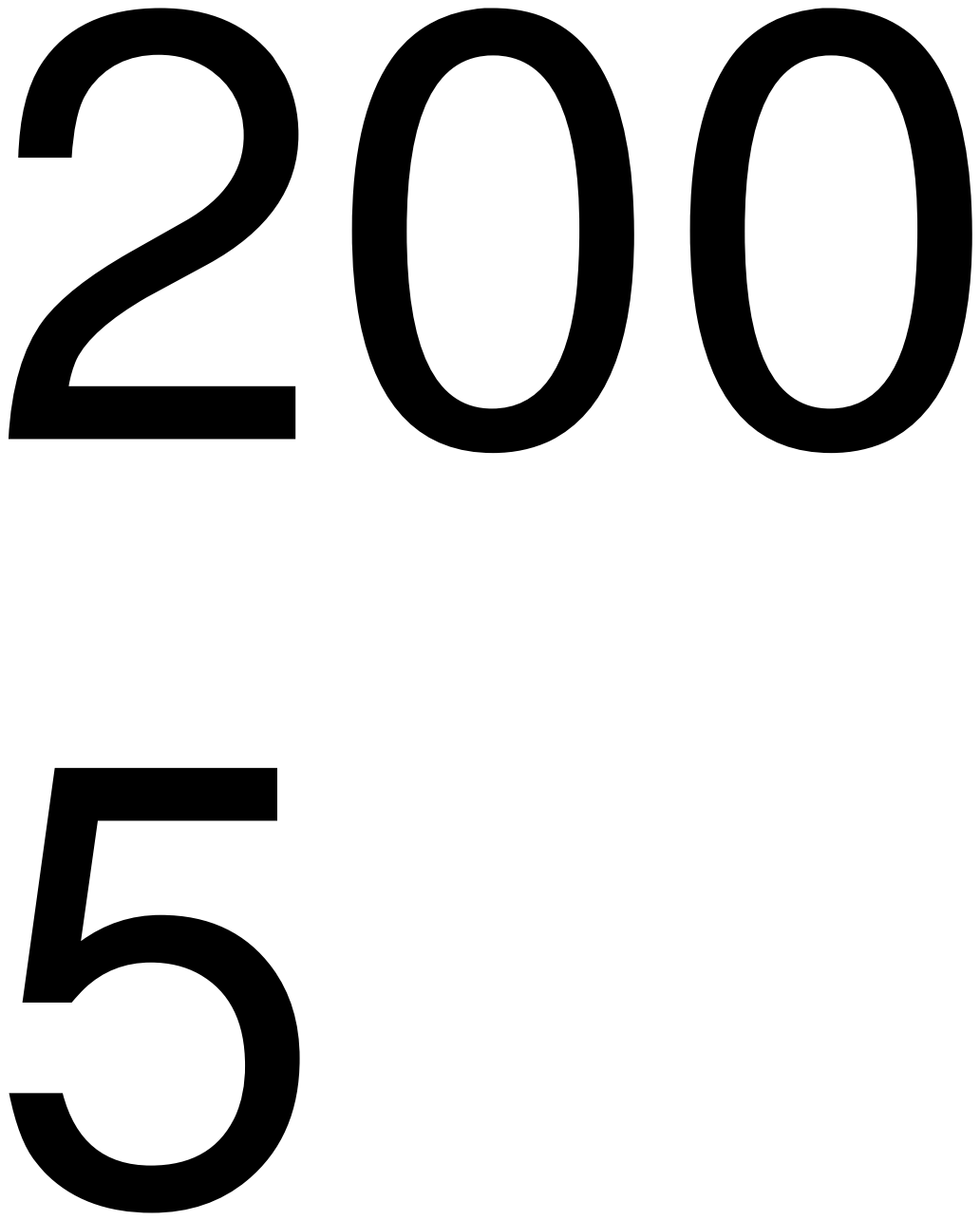
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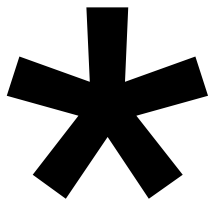

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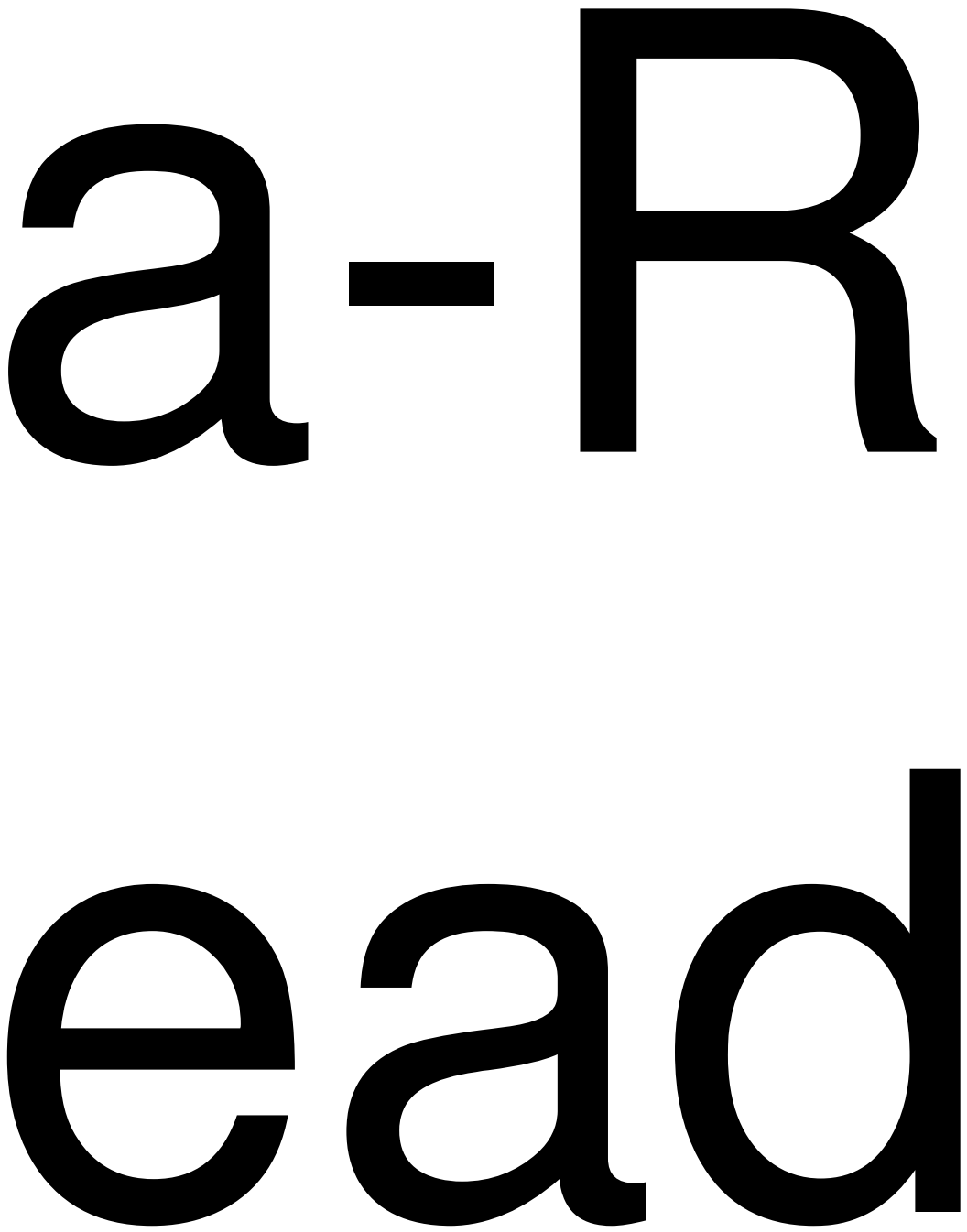
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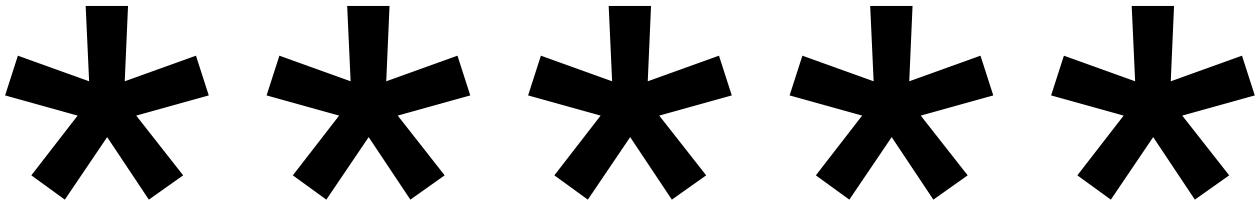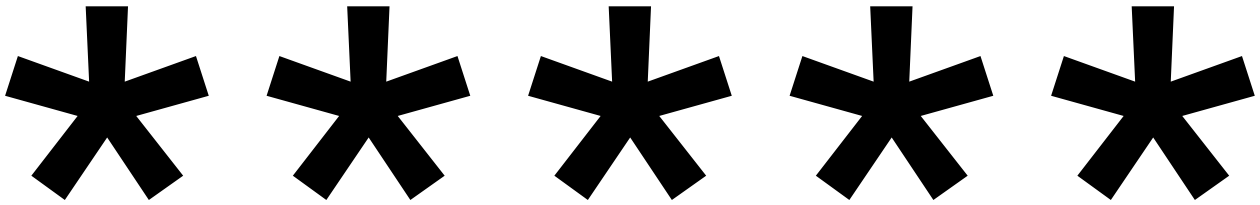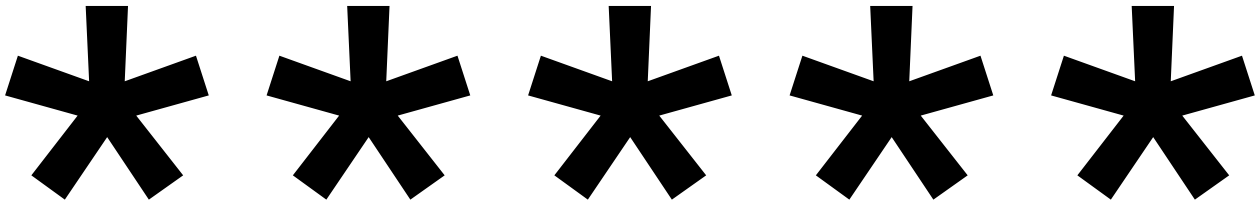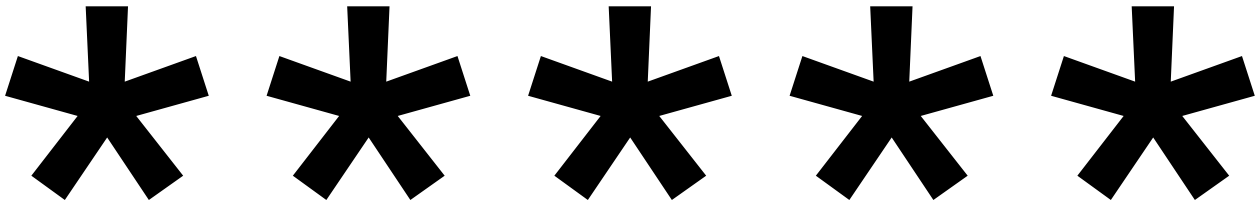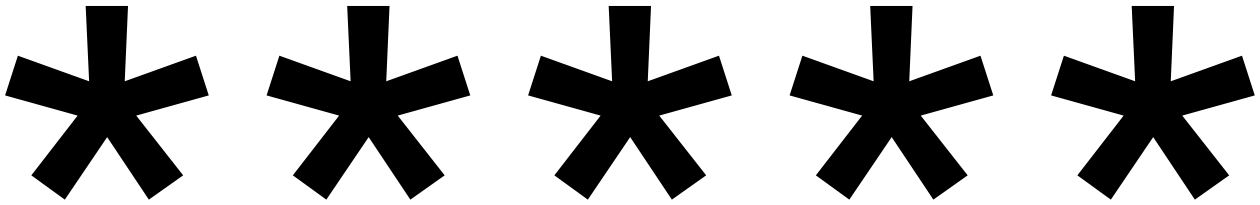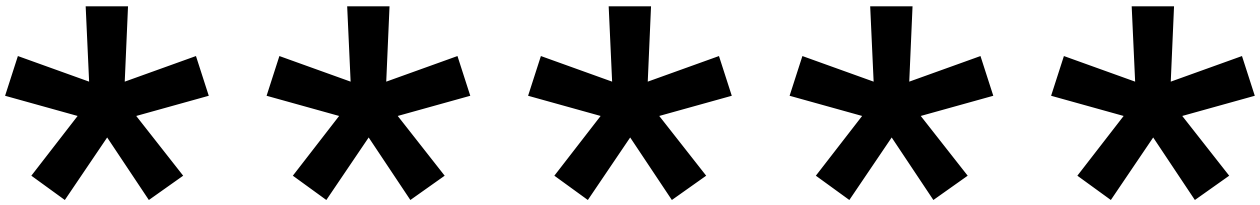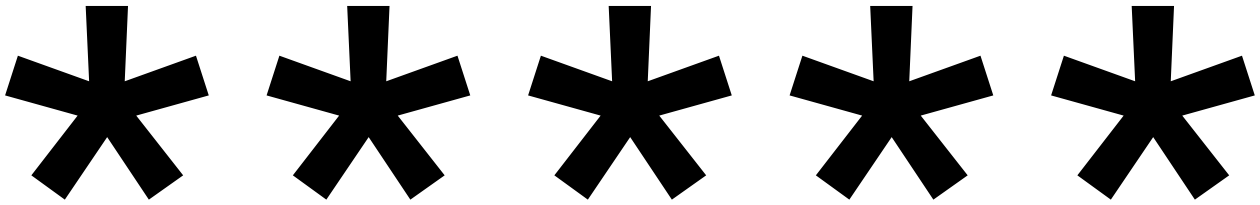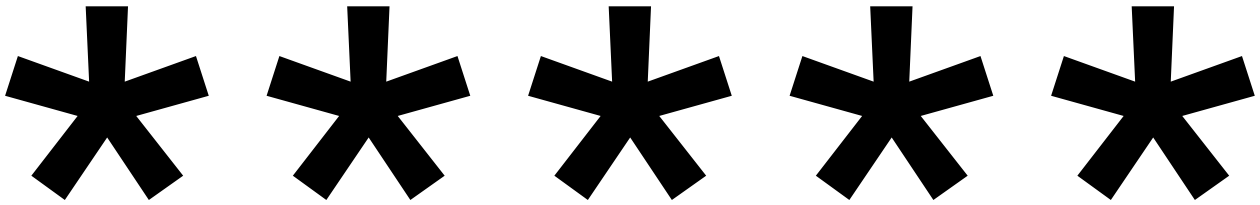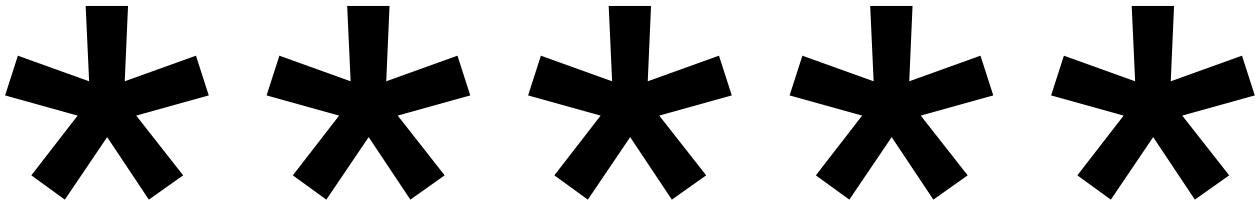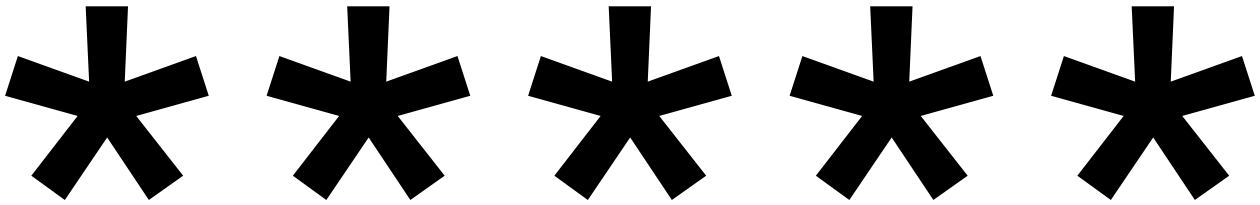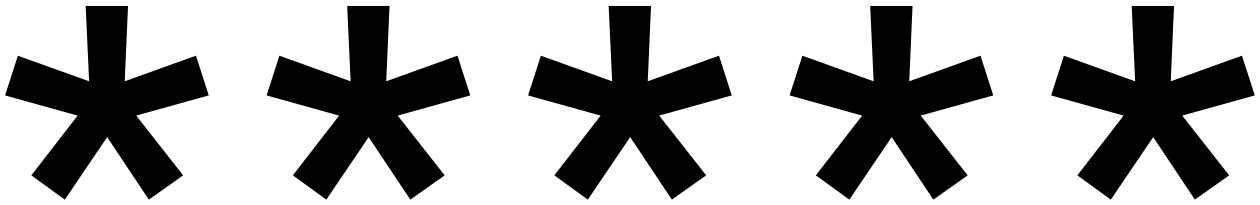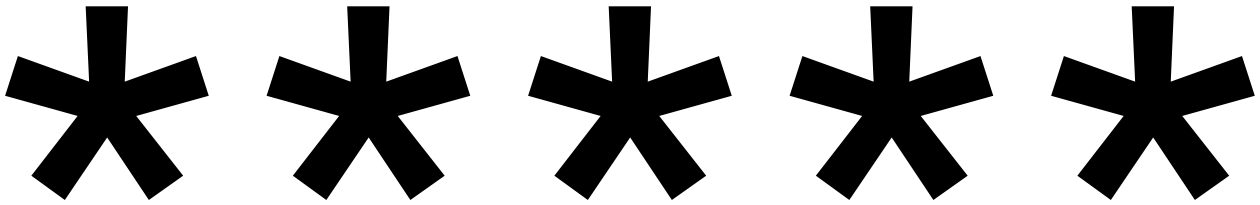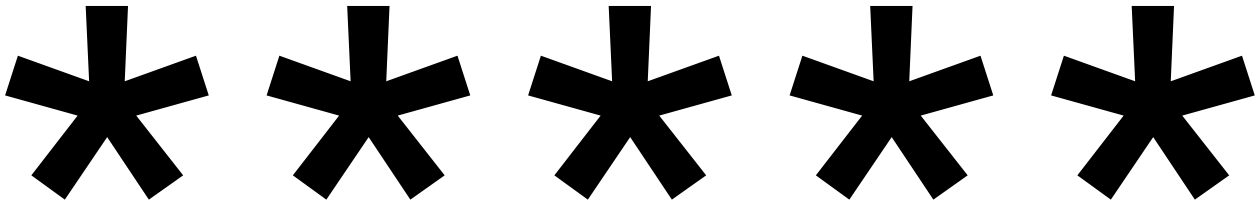
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