Verification & Refinement

Input Question

Forward Solve Sampling (N Candidate Solutions) CoT

Candidate Solution (Reasoning Chain + Answer)

Backsolve Verification

b_score (0-1)

Verdict (PASS/FAIL)

Candidate Solution (Reasoning Chain + Answer)

Falsification Ensemble (K Adversarial Attempts)

f_score (1 - mean(error_prob))

Candidate Solution (Reasoning Chain + Answer)

Anti-Verbosity Regularization

$l\_score = \exp(-\lambda * token\_count / tokens_0)$

Weighted Aggregation

$\sum$

$weight = (b\_score^{\alpha}) * (f\_score^{\beta}) * l\_score$

Group candidates by answer value

Sum weights per answer

Select answer with maximum total weight

Final Answer (Selected)