MMLU Comp Security  $\log p_{\theta}^{\mathsf{Vocab}}(\mathsf{Correct\ Choice})$ — Cerebras (Param. and Data Scaling) — INCITE 7B Param. (Data Scaling) Correlation: spearman Correlation: pearson Correlation: kendall LLM360 Amber 7B Tokens (Param Scaling) — OLMo 7B Param. (Data Scaling) — Pythia 12B Param. (Data Scaling) — Pythia 300B Tokens (Param. Scaling) 1.00 -1.001.00 1.00 -1.000.00Correlation Between FLOPs and Scores (Per Sample) Correlation Between FLOPs and Scores (Per Sample) Correlation Between FLOPs and Scores (Per Sample)

0.8

0.2

Model Family