MMLU Prehistory $p_{\theta}^{\mathsf{Choices}}(\mathsf{Correct\ Choice})$ — 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) 0.750.750.751.00 1.00 -1.001.00 -1.00Correlation Between FLOPs and Scores (Per Sample) Correlation Between FLOPs and Scores (Per Sample) Correlation Between FLOPs and Scores (Per Sample)

1.2

1.0

0.4

0.2

≥ 0.8

Model Family