MMLU HS US History  $\textstyle\sum_{\mathsf{Incorrect}\ \mathsf{Choice}} p_{\theta}^{\mathsf{Vocab}}(\mathsf{Incorrect}\ \mathsf{Choice})$  $p_{\theta}^{\mathsf{Vocab}}(\mathsf{Correct\ Choice})$  $10^{0}$  $10^{-1}$ Probability Mass  $10^{-3}$  ss  $10^{-3}$  $10^{-4}$  $10^{-5}$  $10^{17}$  $10^{18}$  $10^{19}$  $10^{17}$  $10^{22}$  $10^{20}$  $10^{21}$  $10^{22}$  $10^{18}$  $10^{19}$  $10^{20}$  $10^{21}$ Compute (6ND) Compute (6ND)

Model Family

— Cerebras (Param. and Data Scaling)

— Pythia 12B Param. (Data Scaling)

— Pythia 300B Tokens (Param. Scaling)