

Name _____

Ranking Challenge: Small Models vs. Big Models

Small and big language models each have strengths. **Small models** are faster, cheaper, and can run directly on laptops or even smartphones without internet. They are practical for schools, families, and simple tasks, but they may struggle with complex reasoning or technical subjects.

Big models are trained with massive amounts of data and billions of parameters. They are powerful, able to handle detailed reasoning, scientific explanations, and accurate translations into many languages. However, they require expensive servers, use large amounts of electricity, and respond more slowly than smaller models.

Some tasks are clearly suited for small models, others for big models, and some may fall in between. Ranking tasks helps us see which kind of model is the better fit depending on the context.

Instructions: Rank each task from **1 (best fit for Small Models)** to **5 (best fit for Big Models)**. Do this three times, considering a different situation each round. Write your rank number in the blank.

Round 1: Everyday Use

- ___ Summarizing a short news article
- ___ Running directly on a smartphone
- ___ Translating documents into five languages
- ___ Generating highly technical scientific explanations
- ___ Providing tutoring help for basic writing skills



Round 2: Professional Use

- ___ Summarizing a short news article
- ___ Running directly on a smartphone
- ___ Translating documents into five languages
- ___ Generating highly technical scientific explanations
- ___ Providing tutoring help for basic writing skills

Round 3: Cost and Resources

- ___ Summarizing a short news article
- ___ Running directly on a smartphone
- ___ Translating documents into five languages
- ___ Generating highly technical scientific explanations
- ___ Providing tutoring help for basic writing skills

Which task stayed in the same place across all three rounds? Why do you think it stayed consistent?