Name _____

AI Systems Side by Side - Comparing Inputs and Outputs

AI in Weather Forecasting - Modern weather prediction relies heavily on artificial intelligence. The system begins by collecting **input** from thousands of sources: satellites, ground-based sensors, ocean buoys, and radar stations. These inputs include temperature, humidity, wind speed, and air pressure.

The AI then processes this massive dataset using trained models to identify likely weather patterns. Based on these calculations, the system produces an **output**: forecasts such as "rain expected in the afternoon" or "a storm may develop within 48 hours." These outputs are delivered to weather apps, websites, and emergency systems.

AI in Online Language Translation - Online translation tools also use AI to process information, but their **inputs** look very different. Here, the input is the text typed by the user, such as an English sentence. The system analyzes the words, grammar, and context, breaking them into smaller parts that can be compared with its training data.

The trained model then generates an **output**: a new version of the sentence in another language, such as Spanish, Mandarin, or Arabic. While the output is often accurate, it may sometimes sound unnatural because the system focuses on patterns in the data rather than true understanding of meaning.

Questions

1. Which statement best describes the inputs of the two systems?

A. Both rely on text typed by users.
B. Weather forecasting uses environmental data, while translation uses human language text.
C. Inputs are nearly identical, since both rely on patterns.
D. Weather forecasting has no inputs because it only predicts.

2. Which statement best compares the outputs of the two systems?

A. Both outputs give predictions: one about weather, one about words.
B. Weather forecasting produces warnings for emergencies, while translation outputs help people communicate.
C. The outputs are useful in different ways: one guides actions outdoors, the other bridges languages.
D. All of the above.

3. What makes the inputs of the weather system more complex than those of the translation system?

A. Weather systems combine data from thousands of sensors, while translation usually starts with one sentence.
B. Translation systems are more complex because human language is harder than weather.
C. Both are equally complex because they rely on models.
D. Weather systems don't need much input data.